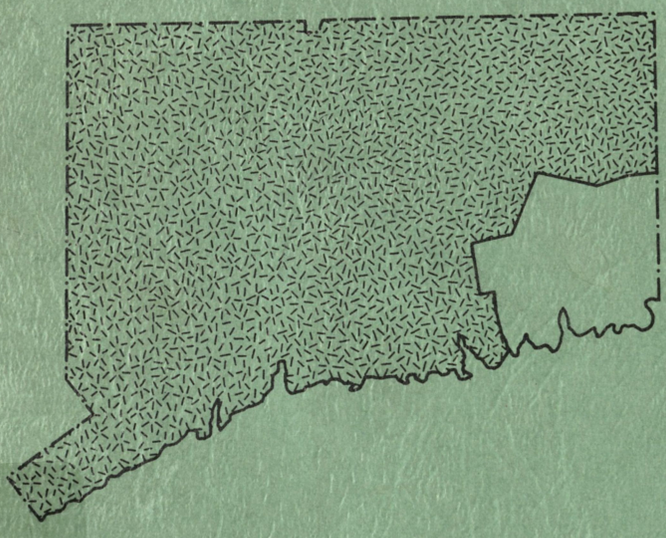
OPEN SPACE & RECREATION



1964

SOUTHEASTERN CONNECTICUT
REGIONAL PLANNING AGENCY

OPEN SPACE AND RECREATION

Southeastern Connecticut Region

This report is part of a comprehensive planning program being carried out in part with an Urban Planning Grant from the Housing and Home Finance Agency, under the provisions of Section 701 of the Housing Act of 1954, as amended, and with the financial participation of a State Regional Planning Assistance Grant administered by the Connecticut Development Commission.

Southeastern Connecticut Regional Planning Agency
139 Boswell Avenue, Norwich, Connecticut

December, 1964

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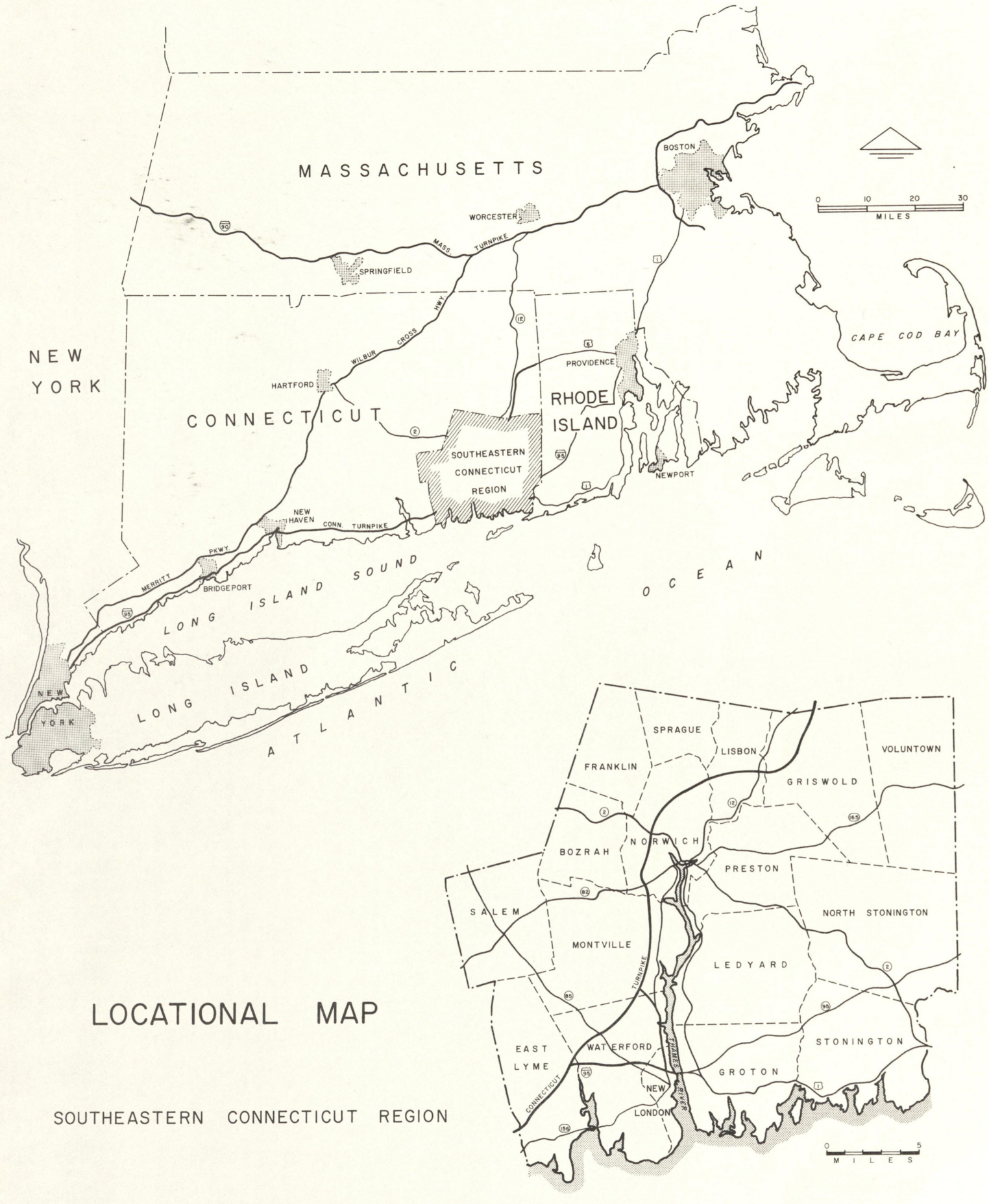

LOCATIONAL MAP

SOUTHEASTERN CONNECTICUT REGION

FIGURE 1

PREPARED BY THE SCRPA STAFF - 1962

I. INTRODUCTION

In the past decade a lively and increasing interest in open space and recreation facilities has developed in this country. This interest is chiefly the result of two factors. First, urban and suburban development is expanding at a remarkable rate into what was once rural countryside. Second, more and more people have realized that unless adequate open space and recreation areas are provided soon in our metropolitan areas, they will never be provided for the simple reason that land will not be available. William H. Whyte summed up the situation quite well with his comment that: "Empty land in Wyoming is not going to help the man living in Teaneck, New Jersey."

Why all this concern over open space and recreation areas? Do we really need them? The answer is an emphatic yes. And there are a number of solid, practical reasons why the answer is yes.

Consider for a moment what some of the more important open spaces are. They are reservoirs and watersheds. They are flood water retention areas. They are natural drainage ways. They are hunting and fishing areas. They are fresh water swamps and coastal marshes, feeding and sheltering wildlife. They are major physical features, shaping our geographical pattern of growth. They are forests and farmland. And they are outdoor recreation areas.

Open space is not a static or a sterile part of a metropolitan region. It is a necessary ingredient of a healthy environment.

Recreation facilities are equally important. They provide a needed release from the tensions of urban living. They are one answer to increased leisure time. They are needed for physical well-being. And in this region they are potential income producers.

There is no question but what Southeastern Connecticut needs a variety of open space and recreation areas now and will need them even more badly in the future. The usefulness of the region's open space and recreation facilities will be far greater if these are organized and planned for as a system, serving the total region, than if they are provided in a hit or miss fashion. One responsibility of the Regional Planning Agency is to study the open space and recreation needs and potentials of Southeastern Connecticut and to advance proposals in a regional plan that would integrate our diverse facilities into a regional system.

This report is a first step toward an open space and recreation plan for the region. The report contains an inventory of existing conditions, an analysis of present and expected needs, and a series of tentative proposals leading toward a regional open space and recreation system. Our viewpoint has been regional, as it legally must be, but in assembling a picture of existing conditions, we have studied and analyzed individual communities.

Proposals in this report are tentative and will remain so until they can be coordinated with all the other elements of the regional plan - such as land use and highways.

Primary sources of data forming the basis of this report were the various public and private agencies serving local open space and recreation needs and appropriate state agencies. In addition, SCRPA's previous studies: Land Use:Patterns and Policies, Land Characteristics, Population and Housing, and Regional Economy, were used.

For those not entirely familiar with Southeastern Connecticut, a few basic facts about the region may be helpful. The region contains 513 square miles of land area, of which 40 square miles are developed for urban and suburban activities. Sixty-five square miles of land are in permanent open space or recreation areas. In 1960 the region had 174,412 residents. Our population is expected to rise to 224,400 by 1975 and to 329,600 by 2000.

ACKNOWLEDGEMENT

We would like to take this opportunity to thank the many local and state officials and agencies who cooperated fully in providing information, opinions, and suggestions during the course of this study. We particularly wish to thank the following persons who served on a special Open Space and Recreation Advisory Committee for this study and assisted greatly in its completion:

Theodore Bampton, Director, State Board of Fisheries and Game; Kenneth Crandall, Stonington Recreation Commission; Woodrow Douville, Director, Stonington Recreation Commission; Dr. Richard Goodwin, Connecticut College; Stanley Hale, New London County Agent; Henry Haley, Groton Recreation Commission; William Kelley, Director, Norwich Y.M.C.A.; Celest LaMare, Waterford Recreation and Parks Commission; Chester Martin, State Park and Forest Commission; James Mercer, Chairman, Waterford Conservation Commission; Herbert Moran, Director, New London Department of Recreation; Richard Sharpe, Norwich; Richard Symonds, Connecticut Development Commission; Dr. Paul Waggoner, Connecticut Agricultural Experiment Station; Peter Young, Chairman, Stonington Recreation Commission; and Robert Young, Connecticut Development Commission.

II. OPEN SPACE

INTRODUCTION

OPEN SPACE STANDARDS

FUNCTIONS OF OPEN SPACE

INVENTORY AND EVALUATION

- Permanent Open Space
- Undeveloped Land

TOWARD A REGIONAL OPEN SPACE SYSTEM

INTRODUCTION

The term "open space" can be variously defined. It can be applied to a vast wilderness area or to relatively small parcels of undeveloped ground between houses. It is, in effect, any land area that remains in a natural, undeveloped state. It may be publicly- or privately-owned, open to the public or restricted. It may be fairly certain to remain as permanent open space under the control of a public or private agency with a conservation role, or it may simply be undeveloped land that could very likely be developed in the future.

At the present time Southeastern Connecticut abounds in open space. Less than 10% of its 513-square-mile area is intensively developed. Residential, commercial, and industrial uses are largely concentrated along the coast and in the Thames River Valley. Surrounding this "development core" are hundreds of square miles of wooded hills and farmlands, interspersed by numerous fresh water lakes and stream valleys.

In this setting there is a natural tendency to take open space for granted. With so much of it available, few people see the need for preservative action. It is difficult to picture Southeastern Connecticut without its many miles of rural roads winding through wooded hills and farmlands. But population growth means that additional homes, businesses, and industries will be covering the hillsides and farm fields. Ironically, the population growth that will reduce the region's open space in the future will also produce an ever-growing demand for natural areas and their associated resources. If the open space needs of the region's future citizens are to be met, thought must be given now to means of retaining key natural areas as permanent open space.

This chapter will concern itself primarily with the permanent sector of open space and will include an inventory of existing public and private acreage. Although we can expect the major portion of the region to remain in an undeveloped state for many more years, we should act now in identifying the most valuable open space land and take measures to protect it from harmful usage. Only by this means can we be assured of a functional open space system in years to come.

OPEN SPACE STANDARDS

How can we determine the open space needs of our growing population? There are no accepted standards to guide us. But in answering this question, two factors should be considered.

First, the use capabilities of permanent public open space and its location with respect to population are of greater importance than total acreage. A tract of land that is inaccessible or is largely unusable by both man and animals, for example, might

afford no benefit in spite of its retention as open space. Every parcel of permanent open space should perform some function, either aesthetically, economically, socially or culturally.

Second, because of its location with respect to the large urban centers of the northeastern seaboard, Southeastern Connecticut can derive considerable economic benefit from tourism if it retains its scenic qualities. By affording a distinct contrast with the crowded metropolitan centers, it can be highly attractive to vacationers.

The key to establishing a permanent open space system in this region is the identification of areas which, if retained in their natural state, can supply needed resources, such as water or game, or can make the region more attractive both to residents and visitors alike. Our standards should, therefore, reflect function and quality before quantity.

FUNCTIONS OF OPEN SPACE

Public investment in preserving permanent open space areas is justified only if the open space serves a useful purpose. Before public funds are expended to acquire open space, the functions that the open space is capable of performing should be clearly seen. The more important of these open space functions are listed below. Open space should serve one or more of the following functions.

(1) Provide timber. Our forests have decreased in economic value through decades of overuse and a lack of conservation. Today the state is actively striving to restore or preserve thousands of acres of publicly- and privately-owned woodland to supply future needs.

(2) Preserve water supplies. The availability of adequate supplies of potable water is becoming a major community asset in the expanding competition to attract new economic activity. Although Southeastern Connecticut is blessed with an abundance of water, only a small portion of the total supply has been exploited so far. The exploitation of additional supplies will depend primarily on our ability to protect reservoir sites and the streams that feed them from detrimental land development.

(3) Protect natural drainage ways. The amount of water in a stream bed is highly dependent upon the absorptive capabilities of the land along its course. As more acres in our stream valleys become covered with homes, lawns, driveways, and streets, water runoff into streams becomes proportionately greater. Streams are also necessary to carry away effluent from domestic and industrial sewerage systems. In order to ensure continued adequate natural drainage, we should mark with care our most important stream beds and prevent them from being filled in or

otherwise impeded from performing their most essential functions.

(4) Protect tidal marsh areas as spawning grounds for marine life. This region has less than 1,100 acres of tidal marsh, but all of it is highly important to the production of a wide variety of commercial and sport fish.

(5) Provide a haven for birds and animals. As the region becomes urbanized, the once large areas of farmland and woodland dwindle in size or become fragmented. The noise and activity of approaching suburbia drive the wildlife deeper into the forests and perhaps eventually out of the region. Only by maintaining extensive areas in a largely undeveloped state can we protect wildlife habitat in this region.

(6) Provide areas for hunting, fishing, camping, and nature observation. More and more people are looking for natural areas in which to spend their leisure time. Hunting requires large areas of woods and fields to accommodate game. Fishing necessitates unpolluted streams, which in turn are rarely found in built-up areas. Nature lovers and campers desire quiet, secluded natural areas, away from the sounds and confusion of the city.

(7) Preserve outstanding topographic features. A waterfall, rocky gorge, prominent hill, rushing stream - all of these are examples of topographic features which should be considered for preservation. Such features frequently are widely known landmarks, tourist attractions, or simply objects of local interest and pride. Too often such features become engulfed by the spread of development before any action is taken to preserve them.

(8) Provide breaks between areas of intensive development. Open space in the form of "green belts" can separate areas of settlement, thus preserving the individual character of each community. Green belts also help to minimize the monotony usually associated with urban sprawl.

(9) Maintain a scenic quality throughout the region. Southeastern Connecticut presently possesses a great variety of scenery - seashore, rivers, hills, and rural charm. Wherever possible this scenic beauty should be preserved for future residents and visitors. As the nearby metropolitan centers continue to grow, this region will become increasingly attractive as a contrast to intensive activity and development of the large cities.

(10) Enhance historical and cultural features. Open space can add significantly to the attractiveness of historical or cultural sites. In the case of historical sites, it may also preserve their original atmosphere.

(11) Preserve agricultural land. Agriculture represents a small but important sector of the regional economy. In spite of its limited economic impact, farming is a major land use which, by keeping fields open, adds considerably to the scenic quality of the region.

INVENTORY AND EVALUATION

PERMANENT OPEN SPACE

Permanent open space in Southeastern Connecticut falls into three general categories. These are: (1) state preserves, (2) private preserves, and (3) water reservoir sites.

State preserves are by far the largest permanent open space category. The following table lists the state-controlled open space areas in this region.

TABLE ONE

STATE-CONTROLLED OPEN SPACE*

Southeastern Connecticut Region

Name	Towns	Acres
Pachaug Forest	Voluntown, Griswold, North Stonington, Preston	18,648
Nehantic Forest	East Lyme, Salem	1,599
Barn Island Wildlife Preserve	Stonington	800
Assekonk Swamp Hunting Area	North Stonington	658
Franklin Swamp Hunting Area	Franklin	301
Indian Reservations	North Stonington, Ledyard	388
Wildlife Sanctuary	New London	5
Pease Brook Hunting Area	Franklin	21
Shetucket River Channel Encroachment Zones	Norwich, Sprague	137
	REGIONAL TOTAL	22,557

* Excludes State Parks.

SOURCE: SCRPA.

These areas provide for much of the open space needs of the state as well as this region. No other region in Connecticut has as much state-owned open space.

The Pachaug Forest is the largest state preserve in Connecticut, and most of it is located in the northeastern corner of

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Wildlife Sanctuary	New London	5
Pease Brook Hunting Area	Franklin	21
Shetucket River Channel Encroachment Zones	Norwich, Sprague	137
	REGIONAL TOTAL	22,857

* Excludes State Parks.

SOURCE: SCRPA.

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The Pachaug Forest is the largest state preserve in Connecticut, and most of it is located in the northeastern corner of

our region.

The other state preserves are scattered throughout the region and are identified on the map on page 15. All told, the state-controlled open space represents 125 acres for every 1,000 persons residing in Southeastern Connecticut.

The state holdings serve a variety of open space needs. The state forests preserve thousands of acres of woodlands, with many acres devoted to the growth of new softwoods. Marked trails and unimproved roads provide access into the forests for nature observers, hunters, and hikers. These forests represent the greatest portion of public hunting land in the region. Hunting is also the major activity in the state-owned lands in Franklin, Stonington, and North Stonington. In addition, wildlife conservation is practiced at each of these sites. Finally, the state holdings protect numerous potential sources of fresh water. Many of the streams which flow through these areas may one day be tapped by nearby urban centers.

In addition to the areas enumerated in Table One, the state owns large tracts of land adjacent to state institutions. About 750 acres of undeveloped state property surround the used portion of the State Farm for Women in East Lyme. At least 600 acres, lying in Preston, Ledyard, and Norwich, remain undeveloped in the vicinity of the Norwich Hospital. Part of these properties may possibly be used for expansion of the state institutions, but the larger portion may well be considered as permanent open space.

Another large tract is the Stone Ranch Military Reservation in East Lyme. Although reserved for use primarily by the military, most of this 1,246-acre area is available to the public for hunting purposes.

Similar arrangements have been made with private property owners to provide hunting grounds. Portions of the extensive holdings of the Sheffield Scientific School in East Lyme are used for this purpose. Similarly, agreements with private landowners provide access by hunters to more than 12,000 acres of farmland and woodland throughout the region.

Private open space preserves are not nearly as plentiful as state preserves, but they are nevertheless important. As a rule, public access is permitted at the private preserves for the purpose of observing various aspects of nature. The following is a list of private preserves in the region.

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The other state preserves are scattered throughout the region and are identified on the map on page 15. All told, the state-controlled open space represents 725 acres for every 1,000 persons residing in Southeastern Connecticut.

The state holdings serve a variety of open space needs. The state forests preserve thousands of acres of woodlands, with many acres devoted to the growth of new softwoods. Marked trails and unimproved roads provide access into the forests for nature observers, hikers, and bikers. These forests represent the greatest portion of public hunting land in the region. Hunting is also the major activity in the state-owned lands in Franklin, Stonington, and North Stonington. In addition, wildlife conservation is practiced at each of these sites. Finally, the state holdings protect numerous potential sources of fresh water. Many of the streams which flow through these areas may one day be tapped by nearby urban centers.

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TABLE TWO

PRIVATE PRESERVES

Southeastern Connecticut Region

Name	Location	Acres
Connecticut Arboretum	New London, Waterford	427
Pequot-sepos Wildlife Sanctuary	Stonington	220
Nature preserve (tidal marsh)	Stonington	9
Nature preserve (upland)	Groton	8
Lowthrope Meadow	Norwich	18
Lucas Woods	Norwich	16
	REGIONAL TOTAL	698

Although small in number, the private preserves conduct a variety of conservation activities. The Connecticut Arboretum is administered by the Botany Department of Connecticut College in New London. It comprises an "extensive collection of native trees and shrubs, a wild flower preserve, several demonstration areas in vegetation management and two natural tracts for ecological research. It serves the College as an outdoor laboratory, the community as a park, and the State as a study area and wildlife refuge."*

The Pequot-sepos Wildlife Sanctuary in Stonington is primarily concerned with providing a haven for birds and small animals. It maintains nature trails and a small museum for visitors.

Of the other private preserves, one is a tidal marsh area near the head of the Mystic River. This affords a protected natural spawning area for marine life, an environment which is becoming increasingly scarce in our coastal area. Another preserve is simply a tract of undeveloped upland in Groton reserved for nature study.

Norwich has two privately-owned natural areas open to the public. Lowthrope Meadow is located in the Norwichtown section and includes about eighteen acres of meadow land. This area enhances several adjacent old homes dating back to the eighteenth century. Lucas Woods is a sixteen-acre tract of hilly woodland on the Thames River at Trading Cove.

Water reservoir sites are important open space uses that conserve and permit the exploitation of one of our most valuable natural resources.

* The Connecticut Arboretum, Connecticut College, New London, 1961.

The reservoir sites shown on Figure 2 serve primarily the three urban centers of Groton, New London, and Norwich. Each of these municipalities depends on water sources beyond its own borders. New London taps sources in Waterford, Montville, and Salem. It has no sources within its own boundaries. Norwich has reservoirs within its borders and in Montville and Colchester; and Groton obtains much of its water from neighboring Ledyard.

The reservoirs in this region serve as wildlife refuges, since they are closed to the public, but they are not available for active recreational use. Consideration has been given on occasion to opening these areas to non-detrimental recreational activities, but to date these lands remain restricted.

Within the areas of undeveloped land lie many of the potential water reserves of the region. The Land Characteristics report, published by SCRPA in 1963, indicated twenty-five highly rated potential reservoir sites in this region. Almost every one of these sites is located in areas which are privately-owned at the present time. Most of these sites will be needed by the end of this century to assure an adequate supply of water.

UNDEVELOPED LAND

Open space, of course, is not limited to permanent preserves. Almost four-fifth of Southeastern Connecticut's 513-square mile area is presently used for agriculture or is privately-owned swamp and woodland. Since agriculture accounts for only 42 square miles*, the major portion of this region - fully 363 square miles - consists of privately-owned woodland, swamps, and unused fields.

These extensive areas of private open space are important assets to the region. More than anything else, they give the region its special rural character and beauty. But they are also the areas into which future development must expand. It is, therefore, of paramount importance that we seek a balance in the future use of these lands between intensive uses and the presently undisturbed natural setting.

Agricultural Land: The continuation of agriculture is a practical way of preserving large areas as open fields providing scenic vistas. A previous SCRPA study identified nearly 21,000 acres of prime agricultural land in Southeastern Connecticut. This land consists of existing large concentrations of cropland and pasture outside the immediate path of development, located on soils considered best suited to agriculture, and with a slope generally below 15%. Although agriculture has declined in recent decades as a major economic activity in this region, it will undoubtedly continue as a major land use in the more rural parts of the region. Many residential areas owe their charm to the

* Land Use: Patterns and Policies. SCRPA, 1962.

fact that they adjoin farmland. The encouragement of farming can help to retain vital links in the chain of open space areas throughout the region.

Interior Wetlands: The privately-owned land also includes most of the region's interior wetlands. The Land Characteristics report classified 99 wetlands as having significant existing or potential value to wildlife. Eighty of these areas are completely in private ownership at the present time. Since interior wetlands are essential to the retention of certain forms of wildlife in this region, it is certainly in the best interests of sportsmen and naturalists to conserve as many of these wetlands as possible. This could be achieved either by the acquisition of many of the wetlands by state and local or private agencies concerned with conservation or by an expanded program of conservation by individual landowners.

Tidal Marshes: The tidal marshes along the coast of Long Island Sound and the Thames River are among the most important open space areas in the region. Tidal marshes are both a highly fertile source of food for marine life and a natural spawning grounds for a wide variety of sport and commercial fish. In addition, they form a natural buffer to storm waves and are of considerable scenic value in an open space system.

This region has almost 1,100 acres of tidal marsh in 23 different areas. (See Figure 6 on page 76.) These range in size from 3 acres to 239 acres, but 14 of them contain 20 acres or more. Of the total, 743 acres, or two-thirds, are privately-owned or controlled by public agencies not concerned with conservation.

An attempt should be made to preserve the largest concentrations of tidal marsh in their natural state. The four largest concentrations account for 60% of all of the privately-owned marshlands. These are: The Pataguanset River, 168 acres; the Wequetequock River, 99 acres; Six Penny Island, Mason's Island, and Outer Mystic Harbor, 93 acres; and the Poquonock River, 65 acres. These four areas might very well be acquired by the state or by private conservation groups and managed as wildlife refuges or hunting preserves.

Outstanding Topographic Features: Many acres of open space throughout the country are devoted to protecting significant topographic features from urban or suburban envelopment. This part of Connecticut has an interesting geologic history and resultant topography, but only a few outstanding natural monuments to the geologic past are in evidence.

Three areas of large boulders and irregular landscape, of particular interest to geologists, exist in Ledyard and Waterford. In addition, the following three sites should be considered in any open space plan:

(1) Lantern Hill in North Stonington, a prominent rocky outcrop which is of historical and geologic interest. This feature is presently threatened by the expansion of a mining operation which has already destroyed a sizeable part of the hill. (2) Cochegan Rock in Montville, a large glacial boulder, reported to be the largest detached boulder in the East. This feature is the focal point of a tract of woodland recently purchased by the Boy Scouts of America. (3) The eastern portion of Oswegatchie Hill in East Lyme offers excellent possibilities as a natural area for studying geology and plant ecology. Rising sharply from the western shore of the Niantic River to a height of 250 feet, the hill is a prominent regional landmark.

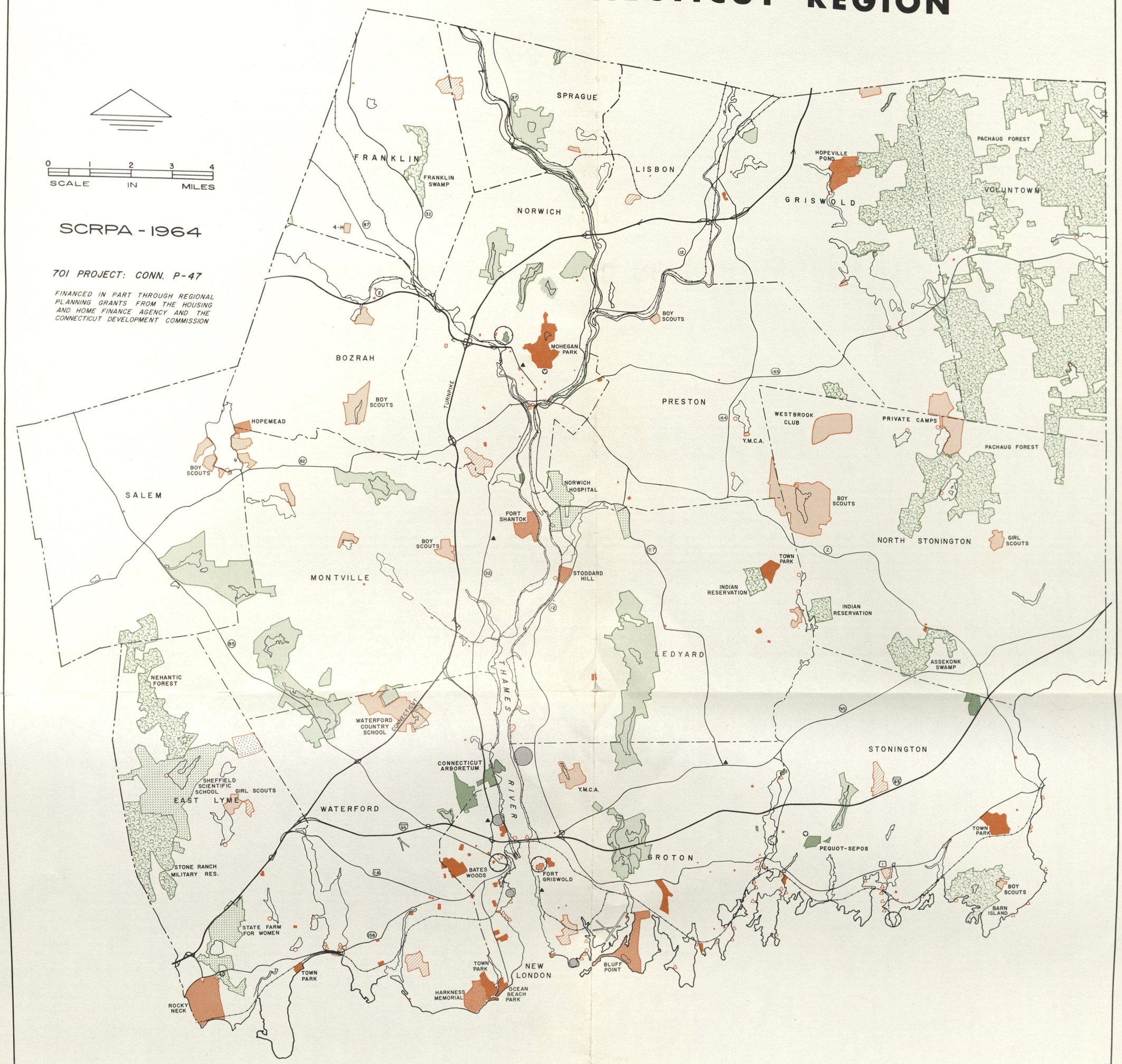
TOWARD A REGIONAL OPEN SPACE SYSTEM

All of the previously discussed features are potential ingredients in an open space system. Although any of them could prove beneficial to individual municipalities, many are favorably located for inclusion in an organized region-wide system. The map on page 76 suggests a general pattern of open space that would center on major existing open space and recreation areas and tie these together by incorporating the interlying areas into the system.

Actual purchase of all portions of this vast area is neither likely nor desirable. Some portions, such as reservoir sites, may eventually be purchased by public or private agencies; others may remain undeveloped for topographic reasons; much of the remainder could be maintained in a generally open state through large-lot or estate zoning. Chapter VIII discusses these and other methods of acquiring and retaining open space. Whatever the method, however, an organized pattern should be strived for - one which will preserve the scenic quality of the region and best serve the resource needs of its residents.

FIGURE 2

SOUTHEASTERN CONNECTICUT REGION



EXISTING OPEN SPACE AND RECREATION AREAS

LEGEND

PERMANENT OPEN SPACE
- STATE PRESERVES
- WATER RESERVOIR SITES
- EXTENSIVE INSTITUTIONAL LAND
- CHANNEL ENCROACHMENT ZONES
- PRIVATE PRESERVES

RECREATION AREAS
- STATE PARKS
- MUNICIPAL FACILITIES
- CAMPS AND CLUBS
- GOLF COURSES
- COMMERCIAL AREAS
- PUBLIC BOAT LAUNCHING SITES
- MARINAS AND YACHT CLUBS
- Y.M.C.A. OR Y.W.C.A.

TOURIST ATTRACTIONS
- HISTORIC CONCENTRATIONS
- MUSEUMS
- MILITARY INSTALLATIONS

III. STATE PARKS

INTRODUCTION

STANDARDS

INVENTORY AND EVALUATION

POTENTIAL SITES

INTRODUCTION

The role of state parks in Connecticut is twofold. First, each park is part of a state-wide system intended to supplement, rather than substitute for, local recreation facilities. In most instances the state parks involve comparatively large tracts of land which would conceivably be beyond the acquisition capabilities of individual municipalities. This large size permits the provision of recreation facilities such as camping grounds, hiking trails, and nature study areas, which require extensive amounts of land. In the development of state parks the emphasis is on providing natural, rather than artificial, recreation facilities. In most cases the locations of these parks are well beyond the urbanized portions of the state and require automotive access.

Second, state parks frequently preserve valuable natural or historic features. All of the state parks in Southeastern Connecticut contain either an historic site or frontage on a major body of water. The latter affords public access to beaches, boat landings, fishing sites, or simply to scenic vistas.

At the present time there is no governmental agency responsible for providing parks at the regional level. This lack of regional facilities lends greater importance to the state parks. In effect, they must serve as regional parks for the residents of the region in which they are located as well as serving state-wide needs.

STANDARDS

Opinions regarding the amount of land needed for parks, in addition to municipal facilities, vary considerably. A review of recreation standards by the National Recreation Association indicates a trend toward establishing greater park standards in recent years.

> "For many years there has been considerable agreement that 10 acres in outlying regional parks should be provided for each 1,000 people living in the region... A number of recent proposals call for greater acreage; in more than one instance for 15 acres of county or regional parks and recreation areas per 1,000 people as a desirable long range goal. One regional commission has proposed that in addition to 10 acres of county and regional parks, there should be 10 acres of state owned properties to serve each 1,000 people of a metropolitan region."*

In considering standards for this region, we should bear in mind three points: (1) State parks in Connecticut are used by

* Standards for Municipal Recreation Areas. National Recreation Association, New York, 1962.

non-residents as well as residents of the region in which they are located. (2) Southeastern Connecticut has an unusually large amount of open space, both private and public, capable of providing areas for such recreational activities as hunting, hiking, nature study, and camping. (3) There are many private and commercial recreation facilities throughout this region which accommodate residents and visitors alike.

From this we conclude that it would be impractical and unjustifiable to suggest standards for state parks in this area in excess of those generally accepted in other parts of the country. Therefore, we propose that 10 acres of adequately developed state parkland per 1,000 persons is a reasonable minimum standard for Southeastern Connecticut.

According to this standard, Southeastern Connecticut should presently have 1,900 acres of land in state parks. By 1975 we should have 2,245 acres, and by the year 2000 there should be at least 3,300 acres of state parks in this region.

INVENTORY AND EVALUATION

At the present time nine areas in Southeastern Connecticut are designated as state parks. These represent a total acreage of 1,682 acres, serving an estimated current population of 190,000, or 8.8 acres for every 1,000 residents. Park size and the degree of development vary considerably from park to park, as can be seen from an examination of the following table.

TABLE THREE

STATE PARKS

Southeastern Connecticut Region

Name	Location	Acres	Facilities
Bluff Point	Groton	265	U
Fort Griswold	Groton	16	M,O
Fort Shantok	Montville	177	H,O,S,P,X
Harkness Memorial	Waterford	234	P,M
Hopemead	Bozrah, Montville	53	U
Hopeville Pond	Griswold	316	B,O,F,H,S,P,C
Minnie Island	Salem, Montville	1	U
Rocky Neck	East Lyme	568	B,C,F,H,L,P,X,S
Stoddard Hill	Ledyard	52	B,F,P

FACILITIES: U-Undeveloped, B-Boating, C-Camping, F-Fishing, H-Hiking, L-Shelter, M-Museum, O-Historic Site, P-Picnicking, S-Swimming, X-Concessions

SOURCE: Connecticut State Park & Forest Commission.

Attendance records from four of the region's state parks show that the degree of use is closely dependent on the number and variety of facilities available at a particular park. The following table gives the attendance figures for the region's four largest and best developed state parks.

TABLE FOUR

1963 STATE PARK ATTENDANCE

Southeastern Connecticut Region

Name of Park	Attendance
Rocky Neck	351,393
Hopeville Pond	101,368
Fort Shantok	85,819
Harkness Memorial	35,973
Total	574,553

SOURCE: Connecticut State Park & Forest Commission.

Obviously, Rocky Neck State Park is the most popular state park in this region. A more detailed analysis of visitors to this park gives us some indications of the region's potential as a recreation area. A survey conducted by the Connecticut Highway Department in 1961* illustrated most pointedly the dual role of this park, both as a facility for people in this region and as one for persons residing in other regions of the state. The survey showed that only 25% of the visitors were from Southeastern Connecticut. Nearly 47% were from the Capitol Region alone, and the remaining 28% were from other parts of Connecticut. This indicates that municipalities that depend upon state parks to meet their municipal park requirements will be shortchanging their residents in the long run.

The present degree of development of state parks in this region leaves much to be desired. Only three parks - Ft. Shantok, Hopeville Pond, and Rocky Neck - provide a range of recreational facilities to attract visitors. Together, these three parks comprise 1,061 acres, which provide only 5.6 acres of adequately developed state parks for every 1,000 persons in the region. The other state parks are either completely undeveloped or provide for only limited activity.

An obvious first step toward meeting our state park needs is the improvement of existing state facilities. The improvement and opening of Bluff Point State Park should receive the highest priority. Acquisition of additional beach area westward from Harkness Memorial State Park would permit greater use of this park

* Crevo, Charles. Characteristics of Summer Week End Travel. Bureau of Highway Traffic, Yale University, 1962.

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* Creve, Charles. Characteristics of Summer Week End Travel. Bureau of Highway Traffic, Yale University, 1962.

by the general public. Similar expansion and development of Hopemead State Park along the northeastern shore of Gardner Lake would provide a badly needed park in the northwestern quadrant of the region. Finally, a restoration program at Ft. Griswold is needed to justify the inclusion of this historic site as a state park. A picnic area and improvement of walking trails throughout the site could greatly enhance its usability.

From a review of statistical data for state parks and from discussions with individuals throughout the region, it appears that the facility that is most in need of expansion is camping sites. Camping has recently become an increasingly popular way to spend weekends and vacations. Modern campers use a variety of camping equipment, including trailers, converted trucks and buses, or simply collapsible tents. In almost every instance, however, campers need specially equipped camp sites when they stop for the night. Minimum requirements include water and sanitary facilities, but electricity is also desirable in some cases.

Only two state parks in Southeastern Connecticut are equipped to handle campers. Rocky Neck State Park has a total of 285 camping sites and Hopeville Pond State Park has 100. Of the total, 205 are considered long-term sites and may be reserved in advance for 30 or more days. The remaining 180 sites are available for one to fourteen days and are not reservable. The popularity of camping has resulted in very heavy use of these camp sites, and they are usually filled to capacity. With only 180 short-term sites available in the entire region, many visitors who might like to spend more time in the area are probably forced prematurely to move on to neighboring areas where more plentiful camping facilities are available. Additional camp sites are badly needed to accommodate both the residents of the state and visitors from other parts of the country.

POTENTIAL SITES

The region obviously needs additional state parks of the type that can offer a broad range of recreational activities. Fortunately, sites for new state parks are plentiful in Southeastern Connecticut. The criteria used for locating possible park sites in this region are as follows:

1. The site should contain at least 300 acres of predominantly undeveloped land.

2. An unusual topographic feature, such as water frontage or a prominent hill, should exist at each site.

3. Sites should be situated in a manner which will best serve the expected pattern of urban development.

4. Each site should contain sufficient level land for development as picnic grounds, camping areas, and active recreation areas.

On the basis of these criteria, seven sites have been selected which would provide a satisfactory system of state parks throughout the region and which would provide adequate regional park acreage to the end of this century. These are shown on the Tentative Open Space and Recreation Plan on page 76 and are discussed briefly below.

(1) Poquetanuck Cove. This park would be a northern extension of Stoddard Hill State Park and would encompass both shores of the cove and the east bank of the Thames River opposite Ft. Shantok. It would also extend south from Ft. Shantok to preserve the west bank of the river opposite Stoddard Hill State Park. The primary intent of the park would be to preserve a portion of our tidal estuary in its present scenic state and to exploit its natural potentials for boating and other recreation use. With the completion of the new Thames River bridge along the northern boundary of this park, it would be within 15 minutes driving time of 50% of the region's expected 1975 population and accessible within 30 minutes to any part of the region.

(2) Lantern Hill. A park centering on this prominent hill would preserve one of the region's most outstanding geologic features. The hill itself is well-suited for hiking and nature study, while the land surrounding it could be used for more active recreational activities.

(3) Green Fall Pond. Most of this pond presently lies within the Pachaug State Forest. There is a public boat launching site at the northern end of the pond, and the waters and adjacent land are used in the summer for swimming and camping. The pond is accessible over unimproved dirt roads through the state forest. More intensive development of this area would make it a very good park.

(4) Pachaug Pond. This is the largest fresh-water pond in the region and, surprisingly, has only a small portion of its shoreline developed. The state owns a tract of land along the northern shore and is constructing a boat launching site at the southern end of the pond, but most of the frontage is privately-owned and subject to any type of development. The pond is located entirely within the town of Griswold, which to date has no zoning, subdivision, or planning regulations or policies that can control development. Pachaug Pond probably has more recreation potential than any other inland water body in the region, but only prompt action can insure that it will be available for public use in the future.

(5) Shetucket River. The banks of this river between the northern boundary of the region and the community of Baltic offer

a beautiful setting for a park. Although the water level in the river is not high, the adjacent lands could be developed for active sports, hiking, camping, and picnicking. Should the dam at Baltic ever be rebuilt, the resultant impoundment of water would permit many additional water-oriented activities.

(6) Powers Lake. This lake lies within the vast land holdings of the Sheffield Scientific School in East Lyme. The land surrounding the lake is almost completely undeveloped and consists of densely wooded hillsides. The state has a public boat launching site on this lake now. Additional land along the western and northern shores of this lake could be developed for camping, picnicking, and winter sports.

(7) Silvias Pond. This small pond is located about two miles north of the Borough of Stonington. Its adjacent lands are largely undeveloped and the varied topography could accommodate a wide variety of recreation facilities. A state park with extensive camping areas in this part of the region could do much toward providing more accommodations for the increasingly large number of tourists visiting area attractions.

Well developed parks at these locations, together with the full development of existing state park lands, would provide about 3,800 acres of state parks in this region. This would satisfy the needs of an anticipated regional population of 330,000 by the year 2000.

IV. MUNICIPAL RECREATION FACILITIES

INTRODUCTION

STANDARDS

INVENTORY AND EVALUATION

- Rural Towns
- Suburban Towns
- Urban Towns

SUMMARY

INTRODUCTION

The most important features in a recreation program are the public facilities that are available every day to the residents of each individual municipality. These are the playgrounds, parks, and recreation centers provided at the municipal level and intended for use primarily by local residents.

The recreation system of each town in Southeastern Connecticut differs from that of its neighbors, depending on the size, density, and distribution of its population. Generally, the towns with the larger populations provide the greater number of recreation facilities. The towns with the larger populations generally provide the most variety in their recreation facilities.

STANDARDS

Most of the published standards available for evaluating the adequacy of municipal recreational facilities are intended for urban areas. Little is available to indicate the ideal facilities for a suburban or rural town. A review of studies from other areas throughout the country indicates that the best approach toward establishing municipal standards is on the basis of total population and population density rather than on a geographic or other basis. The approach of reserving a specified percentage of a municipal area for recreation is unrealistic in that it does not take into account possible extremes in population density in some areas that would considerably increase or decrease recreation requirements.

Because of the varying characteristics of towns and cities in Southeastern Connecticut, it is not possible to establish uniform recreation standards for all communities. Rural towns, for example, certainly do not need the same types of facilities as the larger cities. As a result, it is necessary to determine the types of facilities that each individual town should have at the present time and in the future.

The basic element of a municipal recreation system is the neighborhood playground. In an urban setting the neighborhood is usually the area served by an elementary school and consists of about 5,000 to 6,000 persons. Here, the playground would serve a relatively compact area and would be best located adjoining the school property so that it would receive maximum use. Population in a rural or suburban town usually is more widely dispersed, and neighborhoods are often difficult to define or actually are nonexistent. In these instances, accessibility to users is an important criterion in evaluating playground needs. Again, the location of playgrounds in the vicinity of elementary schools appears to be the most practical means of providing for this recreation need.

The size of a playground should be proportionate to the population it is serving. As a bare minimum, each playground should contain four acres to provide adequate space for equipment and informal play areas. As the population of the service area increases, there should be an average of about 1 acre of playground space for every 800 persons. Thus, an urban neighborhood of 5,000 persons should contain at least 6 or 7 acres of playground area. A rural town with only 1,000 residents should not need more than one minimum-sized playground.

The manner in which a playground is developed is just as important as its location and size. A vacant lot may be used to some extent, but only through the provision of apparatus can the real purpose of the lot as a recreation facility be fulfilled. The basic list of features, such as the sand box, swings, climbing bars, and slides, has been expanded in recent years to include many novel structures. Modern playground apparatus may include old firetrucks, airplanes and boats, pipe or stone climbing forms, and other features designed to stimulate the imagination and muscles of their youthful users.

As a town grows, the playground alone cannot meet the recreational needs of its population. Additional facilities are needed to provide for a wider range of recreational activities. These additional facilities are best provided in the form of a community park.

In the city, a community consists of three or more neighborhoods and is often considered as the area served by a high school. In suburban towns, community boundaries vary, depending on whether the town's population is concentrated or evenly distributed. Scattered concentrations, separated by broad areas of undeveloped land, may result in several communities within a suburban town. A case in point is Stonington, which has concentrations centering on Mystic, the Borough of Stonington, and Pawcatuck while the overall population density of the town is low. In other instances, the population might be evenly distributed throughout the town or be centered in only one area, resulting in a community which comprises the entire town.

Since the community park is intended to serve persons of all ages in the community, it should contain a greater variety of facilities than those found in the neighborhood playground. The following is a list of facilities that might be provided in a community park:

large area for field sports
tennis and basketball courts
recreation building for indoor activities
swimming and wading pools
lawn area for informal games
apparatus area for small children
picnic grounds

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swimming and wading pools
lawn area for informal games
apparatus area for small children
picnic grounds

landscaped park area
automobile parking area

A park of at least 25 acres should be provided in each community and should be located in the vicinity of the local high-school, if one exists. Each community park should serve a population not exceeding 20,000 persons.

Finally, in addition to playgrounds and community parks, large municipal parks should be provided in towns having populations in excess of 40,000 people. Experience has shown that these parks should include at least 100 acres of land, or 2.5 acres of land for each 1,000 persons in a municipality. They may be located in any part of the town or a short drive beyond its borders. The large municipal park should be within a 30-minute driving time of all of the town's residents.

The purpose of the large municipal park is to provide an area with natural charm and beauty in which a large number of people can pursue a variety of recreational activities. Facilities requiring large areas are frequently located in the municipal park. Included might be a zoo, an outdoor theater, riding and hiking trails, picnic grounds for large groups, a day camp, stadium, public golf course, nature preserve, and a pond for water-oriented activities.

The standards against which we evaluate the recreation facilities of individual municipalities in the following pages of this section are bare minimums and are based primarily on general observations from the regional level. In many instances municipalities may feel the need to acquire facilities in addition to what we suggest here. A more detailed evaluation of each town would involve analysis beyond the scope of this report. This discussion is intended to summarize and evaluate municipal facilities in the framework of a region-wide recreation system.

INVENTORY AND EVALUATION

Every town in Southeastern Connecticut has taken a different approach toward meeting the recreational needs of its residents. Some have done very well, while others have done virtually nothing. It is not the purpose of this discussion to analyze in detail the recreational facilities for each town, but simply to present a general summary of the major facilities and to comment upon their adequacy in the light of the standards presented above. The region's towns will be discussed according to their present classification as rural, suburban, or urban towns.*

*Based on a classification system defined in Population and Housing. SCRPA, 1963.

RURAL TOWNS

There are five rural towns in the region: Bozrah, Franklin, North Stonington, Salem, and Voluntown. Each has a population density of less than 100 persons per square mile. Although minor settlements exist in these towns, most of the population is thinly scattered throughout each municipality.

The municipal recreation facilities in the rural towns are limited almost entirely to those provided by the elementary school. Only one town (Bozrah) has a recreation commission, and none has a recreation director. Only Voluntown has a written policy with the school board which permits public use of school recreation facilities. In Salem a deed restriction assures public use of the present school playfield but does not guarantee public access to future school recreation facilities. In the other towns, the use of school facilities by the community is presently non-existent or unofficial. Non-school facilities in the rural towns are limited to an occasional cleared field for ball playing.

The relatively small number of people living in the rural towns does not warrant extensive recreation facilities at this time. Recreational needs can be adequately met by making more intensive use of the school facilities. Each school playground should conform to the previously mentioned standards of a neighborhood playground, and official agreements should be made between the town and the school board regarding public use of them. Recreation commissions should be established to develop programs and to work with school officials in promoting the fullest use of recreation facilities.

Population projections for the rural towns indicate that none of these is likely to have more than 3,000 residents by 1975. Well-developed school facilities should be all that is needed to meet minimum recreation needs in the rural towns for at least another decade. Any one of these communities, however, may wish to provide more than minimum recreation facilities. They may, for example, wish to provide town-owned swimming areas or parks.

The long-range picture for the rural towns is somewhat different. By the year 2000 each of these towns, with the exception of Voluntown, is expected to have at least 5,000 residents. This would call for additional playgrounds and a community park in Bozrah, Franklin, North Stonington, and Salem by the end of the century. The location of these additional facilities would, of course, depend upon the population distribution and future school locations.

SUBURBAN TOWNS

Nine towns in the region are classified as suburban: East Lyme, Griswold, Ledyard, Lisbon, Montville, Preston, Sprague,

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Stonington, and Waterford. Population densities in these towns range from about 120 to almost 500 persons per square mile, and the settlement pattern varies broadly between urban and rural. Recreation facilities, activities, policies and organization are also highly varied. Consequently, we will discuss each town individually.

East Lyme has three municipally controlled recreation areas. Playfields are available at the local school and at Veterans's Memorial Park. McCook Point, a well-developed 23-acre community park, lies near the urbanized part of the town and fronts on Long Island Sound.

McCook Point Park is an excellent example of a community park. Including a variety of topographic features, it has ample parking area, apparatus for children, informal play area, picnic grounds, and an excellent bathing beach.

In terms of total acreage, East Lyme has sufficient recreation land to serve its residents through 1975. It appears desirable, however, to have additional playgrounds in the more rapidly developing parts of the town. More extensive use might also be made of the school facilities. At present, there is no formal arrangement for public use of school recreation facilities. East Lyme has a recreation commission and a part-time director.

Griswold's municipal recreation facilities are limited to the school athletic field and a small ballfield and swimming area fronting on Ashland Pond. Both of these areas are located near the town's urban center, Jewett City.

The town has no organization or individual responsible for recreation. Although the school facilities are very good, there is no official policy permitting public use of them. Such a policy would do much toward satisfying the town's playground needs for both the present and the immediate future. By the end of the century, however, additional playgrounds will be needed in other parts of the town.

Griswold's outstanding present recreation need is a community park. This should be provided in the northwest part of the town so that it is easily accessible to the majority of the town's population. The close proximity of Hopeville Pond State Park should not be considered a substitute for a municipally-controlled community park. One community park and two or three additional playgrounds should adequately serve Griswold's recreation needs to the year 2000.

Ledyard is in an enviable position in terms of municipal recreation acreage. School playgrounds and other small municipal recreation areas total more than 27 acres. In addition to these areas, the town is presently developing a 112-acre municipal park and is purchasing another park site involving more than 100 acres.

With the development of this second park, the town should not need any additional parkland in this century. Additional playgrounds and more intensive development of existing playgrounds, however, will be needed to accommodate the anticipated growth of the town up to the year 2000.

As in other towns, the school facilities in Ledyard should be viewed as integral parts of the municipal recreation system. The Ledyard Recreation Commission has an informal arrangement concerning the use of school facilities now, but the town should consider a more official policy for the future.

The recreation facilities in Lisbon and Preston are similar to those found in the rural towns. Neither town has a significant population concentration, and recreation areas are limited almost entirely to school playgrounds. Preston also has a ball field that is not school-connected. Although neither town has a recreation commission, Preston has a formal policy permitting public use of school recreation facilities.

The immediate needs of Lisbon and Preston are few. Each should have at least one additional playground, and Preston should acquire a community park by the year 1975. Lisbon's population is not expected to warrant a community park until the last decade of this century.

Montville has more than its share of private and state recreation areas, but its municipal facilities are lacking. School playgrounds and a ball field are the extent of its recreation system, and there is no formal policy permitting public use of school facilities. Although the town has a recreation commission, little has been done to provide badly-needed municipal facilities.

Within the next decade Montville will need at least three more playgrounds in various parts of the town. Because of its large size and multi-centered population distribution, there should be one community park to serve Uncasville and the eastern part of the town and another to serve the rapidly growing western portion. These facilities should be adequate to serve both the present population and the expected increase in this century.

Municipal recreation facilities in Sprague are centered on the community of Baltic. These include the school playground, a ball field, and an apparatus area for small children. Although other parts of the town are lacking facilities, the low population of the town does not appear to justify additional recreation areas at this time. In fact, the present facilities should be adequate through 1975, providing that the school continues to honor its verbal agreement with the town to permit public use of its facilities.

By the year 2000 Sprague is expected to have a population of 7,800. This will necessitate the provision of at least one more

playground and one community park.

Stonington has made important additions to its recreation system in recent years. It now has a recreation commission with a part-time director. A written agreement with school authorities permits the town to make use of school facilities in conducting its recreation program.

Municipal facilities consist of a recreation center, ball field, and small beach area in or near the Borough of Stonington; a Little League ball field in Mystic; a small beach and recreation park fronting on Mystic Harbor; a Little League ball field and a school playground in Pawcatuck; and a large municipal park adjoining the high school near Pawcatuck. At the present time the town is seeking a suitable site for a town beach on Long Island Sound.

According to previously discussed standards, Stonington now has sufficient acreage to meet its recreation needs through 1975. Between 1975 and the end of the century, only two or three additional playgrounds would be needed. Williams Park does not meet the acreage standards of a community park, but the intensive development of the site could compensate for its substandard size. The town park near Pawcatuck far exceeds the standard size for a community park and will probably satisfy the park acreage requirements of the town for many decades to come.

Waterford's recreation system is dominated by its 95-acre municipal park on Long Island Sound. This recent acquisition should become a model municipal park if present development plans are carried out. In addition to this park, the public recreation facilities are confined to school playgrounds, three ball fields, two small town beaches, and a five-acre area near the head of Jordan Cove. The town has a recreation commission with a part-time director and enjoys a formal agreement with the school board that permits public use of school recreation facilities.

In terms of total acreage, Waterford surpasses the recreation standards for a town of its size. However, this does not imply that it has no deficiencies. The town has no community parks conveniently accessible to the majority of its residents. As a result, many residents doubtless use recreation facilities in neighboring New London. Because of its fragmented population distribution, Waterford should develop two community parks near the major population concentrations of the town between now and 1975. Well-developed playgrounds adjacent to each additional school should be all else that is needed to satisfy the town's recreational needs to the year 2000.

URBAN TOWNS

Southeastern Connecticut has three towns that are predominantly urban in character. These are Groton, New London, and Norwich. Each has population densities exceeding 900 persons per

square mile. Most of the region's industrial and commercial activity is concentrated in the urban towns. The current recreational needs of each of the urban towns are similar, but existing facilities vary considerably.

Groton is more deficient in municipal parkland than any other town in the region. School playgrounds, ball fields, small beaches, and neighborhood recreation areas are plentiful, totalling more than seventy acres, but community and large municipal parks are lacking. The only area that can be considered a community park is Washington Park in the city of Groton.

Groton should have at least one more community park now and a third by 1975 to serve its population adequately. There is also a need for one large municipal park now and at least a second by the end of the century. These facilities, together with new and improved playgrounds, should satisfy the town's recreational needs throughout the remainder of this century.

Groton's recreation commission makes extensive use of school facilities in carrying out its recreation program. As the town grows, these facilities will probably be the mainstays of the neighborhood recreation program. But schools provide only certain types of facilities. Picnic grounds, hiking trails, and nature areas are park ingredients, and without these the town cannot possibly have a well-balanced recreation system.

New London has one of the more complete recreation systems in the region. There is a variety of areas and a balanced distribution throughout the city.

Neighborhood playgrounds and ball fields cover almost 40 acres. Riverside Park in the northern and Mitchell Park in the southern part of the city are both well developed community parks serving separate parts of the city. Bates Woods Park, which meets the standards for a municipal park, serves the entire city. In addition to these more conventional parks, the city has Ocean Beach Park, a municipally-owned park that attracts users from both New London and other parts of the state. This park provides an excellent beach, swimming pool, boardwalk, a picnic area, and several other amusement and recreation facilities.

New London's recreation commission has a full-time director and considerable use is made of school recreation facilities. The city's growth in the next 35 years is not expected to warrant additional park areas, but at least two additional playgrounds and more intensive development of existing playgrounds is desirable. The greatest threat to the city's recreation system is the possible transfer of some areas from recreation to other uses. Several instances of this have occurred in recent years, and a continuation of this practice could easily prove detrimental to the city's recreation program.

Norwich's recreation system consists of one very large municipal park and a host of small playgrounds, greens, and ball fields scattered throughout the community. It has a full-time recreation director and makes considerable use of school facilities, even though there is no formal policy governing this use.

Most of the playgrounds are undersized and none comes close to providing the variety of facilities recommended by national standards. Although the playgrounds are well distributed, good distribution alone does not imply adequacy. Mohegan Park, the 350-acre municipal park, is well located to serve the major portion of the town's population, but only a small part of the park has been developed for active recreation use. It contains a small zoo, picnic areas, a swimming pond and skating pond, a rose garden, administration building, and an athletic field.

In spite of the fact that Norwich is presently the most populated town in the region, it completely lacks one of the basic ingredients of the municipal recreation system, namely, the community park. A city of this size should have at least two community parks in addition to its playgrounds and large municipal park. Community parks in the northern and southern parts of the city are needed at this time and should satisfy park needs to 1975. By the end of the century a third community park should be established. During this period, playgrounds should be expanded and more intensively developed. And a program designed to exploit the recreation potentials of Mohegan Park should be given top priority.

SUMMARY

It is apparent that no town in Southeastern Connecticut has a recreation system that fully meets accepted standards. One of the most outstanding deficiencies is a lack of adequate development of existing recreation acreage. For a recreation area to be useful it must be supplied with facilities that will attract and hold the attention of its users. Raw acreage alone does not fulfill recreation needs.

There also seems to be a tendency on the part of municipalities to rely on state parks to fill many of their recreation needs. As we have shown previously, state parks serve a separate function and cannot adequately substitute for good municipal facilities.

The importance of the community park has been overlooked by many towns. This facility is intended to serve as a convenient recreation area for all age groups and should fill the gap between the neighborhood playground and the large municipal park, which is usually not conveniently located to serve day to day recreation needs. This report will not attempt to suggest locations for ad-

ditional municipal recreation facilities, but some general comments on the subject of large municipal parks are appropriate.

A large municipal park should focus on some feature which enhances its recreation potential. Such features include beaches, rivers and streams, lakes and ponds, hilltops and ravines, and historical or cultural sites. Every town in Southeastern Connecticut has at least one such site within its borders. Most towns have several. Municipal recreation officials should, after identifying their park needs, inventory potential sites. Considerable technical assistance is available to municipalities engaged in these activities. Chapter VIII lists the various local, state, and federal agencies equipped to furnish such assistance.

Finally, the provision of municipal indoor recreation facilities has been left almost entirely to private or quasi-public agencies. School auditoriums and gymnasiums are the only municipal indoor recreation facilities existing in most towns. This emphasizes the need for official agreements between school boards and recreation commissions that will permit the fullest use of school recreation facilities by all residents of the region's towns.

V. SPECIALIZED RECREATION FACILITIES

GOLF COURSES

CAMPS AND CLUBS

COMMERCIAL RECREATION AREAS

THE Y'S

OTHER FACILITIES

Many residents require special types of facilities to meet their recreation needs. Such facilities are often associated with a particular sport, or they may be areas restricted for use to a certain group of persons. Specialized areas range from golf courses, to Boy Scout camps, to commercial parks. Each fills a particular recreation need and together they constitute a vital part of the over-all system of recreation in the region.

GOLF COURSES

National recreation standards usually suggest that there should be one 18-hole golf course for each 50,000 persons in a given area, or approximately one hole for each 3,000 persons. According to these standards, Southeastern Connecticut should have a total of 63 holes of golf to adequately serve its present population. These are, of course, general standards and make no distinction between private, commercial, or public golf courses.

At present the region has five 18-hole courses and four 9-hole courses, totalling 126 holes. In spite of this seemingly great amount of golfing facilities, some feel that these facilities do not fill existing needs. This is probably a result of the types of courses in the region. All of the 18-hole courses are private, and non-member access is conditional. Of the 9-hole courses, three are commercial and one is private.

From interviews conducted during the course of this study, it is apparent that the greatest golfing demand locally is for a good 18-hole course that is challenging to the player and open to the public without any conditions. But in view of the large number of golf courses now available in the region, additional courses do not seem to be one of the major recreation needs of the region at this time.

CAMPS AND CLUBS

There are 24 private and quasi-public camps and clubs, accounting for 3,760 acres, in Southeastern Connecticut. These involve private summer camps, Boy and Girl Scout camps, day camps, and sportsmen's clubs. The camps are scattered throughout most of the towns in the region and, in most cases, have frontage on inland lakes.

The majority of these camps are used by children during the summer vacation season. The camping season is generally from the end of June to the latter part of August. During this time, there is an average attendance in excess of 2,500 children at these camps. With only a few exceptions, the camps draw their campers primarily from throughout Connecticut and from the New York metropolitan area. Consequently, the majority of the camps cannot be considered in evaluating the recreational needs of the people in this region.

Day camps to serve area children are now operated by the Norwich and New London Y.M.C.A.'s and by the New London County 4-H organization. This type of camp is likely to become increasingly popular as the region becomes more urban.

Sportsmen's clubs serve a multiple function. They provide their members with a place for social and recreation activities; they preserve hunting areas and fishing streams; and they add many acres of fields and woodland to the region's open space system.

COMMERCIAL RECREATION AREAS

In spite of the region's high potential for recreation, there are relatively few strictly commercial parks and recreation areas. In addition to the previously mentioned golf courses, the region has only four other areas that fall into this category.

The largest of these is the new Ponderosa Park in East Lyme, a tract of more than 300 acres which offers riding, swimming, trail hiking, picnicking, and sports facilities. Two other areas are located on Gardner Lake and consist of relatively small, but very popular, family outing facilities. They provide facilities for swimming, picnicking, and informal games. Finally, a small commercially operated beach provides swimming and bathhouse facilities on Niantic Bay near the railroad bridge.

THE Y'S

Activities sponsored by the YMCA and the YWCA are vital to the region's recreation program. Both New London and Norwich have YMCA centers and the region's only YWCA is located in New London. Each of these centers attracts members from throughout the region. Total membership in the Y's is approximately 3,500 youths and adults.

The Y's offer a variety of recreation facilities and activities, the majority of which are conducted indoors. This is especially significant, since municipal indoor facilities are few and far between in the region. There are Y facilities for swimming, dancing, informal games, individual and team sports, arts and crafts, and meetings. During the summer months, the Norwich YMCA sponsors a day camp on a 10-acre tract of land fronting on Amos Lake in Preston. A considerably larger day camp, consisting of more than 100 acres around Latham Lake in Groton, is operated by the New London YMCA. The New London Y also conducts a day camp at Mitchell College Beach and Mitchell Park.

The region is fortunate to have the services of the Y's, but their successes suggest deficiencies in the municipal recreation systems. Indeed, municipal indoor recreation facilities are badly needed in this region.

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OTHER FEATURES

Hiking trails are an extensive, though lightly used, recreation facility in this region. These trails traverse 44 miles of woods and fields, hills and valleys, providing the hiker with many spectacular views. Trails are maintained by the Connecticut Forest and Park Association and are described and mapped in Connecticut Walk Book, published by the Association. Copies of this book may be obtained by writing to the Association at 15 Lewis Street, Hartford, Connecticut.

Persons traveling through the region may picnic at any one of fifteen roadside picnic areas maintained by the Connecticut Highway Department. Several of these areas provide sanitary facilities and drinking water in addition to picnic tables.

VI. WATER-ORIENTED RECREATION

OCEAN BEACHES

MARINAS

PUBLIC BOAT LAUNCHING SITES

INLAND LAKES

FISHING STREAMS

SEASONAL DWELLINGS

Southeastern Connecticut's most valuable physical asset is its many miles of shoreline on Long Island Sound and the numerous fresh water lakes scattered throughout the region. These not only add to a pleasant setting for the inhabitants but also attract many visitors to the region.

OCEAN BEACHES

Water frontage has been widely exploited in the past for recreational purposes. Out of a total of 64 miles of ocean frontage in the region, 8.7 miles are sandy beaches. These range in ownership from the state to municipalities, from associations to private individuals and are almost all used by swimmers. Unfortunately, general public access to these beaches is limited. At present, only three beaches are officially available for use by the general public. These are at Ocean Beach Park, Rocky Neck State Park, and at the Niantic Bay commercial beach. Together these three provide only 6,900 linear feet of beach frontage. The future development of Bluff Point as a state park will add another 3,800 feet, bringing the public beach total to slightly over two miles. This will still make only 23% of all of the region's ocean beaches available to the general public.

Sufficient information is not available at this time to permit evaluation of the adequacy of this amount of public beach. A major portion of the users of Southeastern Connecticut's public beaches come from other parts of the state. Upon the completion of the current statewide Interregional Planning Program, adequate information will be available on statewide needs to evaluate our beaches.

The remaining 55.3 miles of ocean frontage in this region consists of bluffs, rocky shores, tidal marshes, and rip-rap storm protections. Although these areas are largely unsuitable for swimming, they present a beautiful setting for summer homes, parks, and natural areas.

MARINAS

The Southeastern Connecticut shoreline is liberally sprinkled with facilities to accommodate the growing public participation in boating. At present there are approximately 40 marinas and five yacht clubs located along the rivers, estuaries, and coastline of the region.

From a survey conducted in connection with this study, we can estimate the total capabilities of the region's marinas. By modern standards, the region has no really large marinas; the largest can accommodate an estimated 200 boats in the water and an additional 200 on the land. Together, the area's marinas can

accommodate about 2,000 boats in the water and have land storage for another 2,500 boats. Transient facilities are relatively few, numbering less than 100.

All of the region's marinas are privately-owned. A few towns maintain public docks, but there are no public marinas in Southeastern Connecticut. One was recently proposed for East Lyme, but to date the town has not reached any final agreement on the matter. It is not within the scope of this study to argue the pros and cons of the East Lyme proposal, but some comment on the matter of public marinas seems appropriate.

Our region is closely allied to the water, in terms of both location and history. In the past as well as in the present, the construction, maintenance, and harborage of boats has been a common part of the economic and social activities in this area. As a result, it would seem that any public recreation program should be concerned with water-oriented recreation in general and with boating facilities specifically.

Private marinas in this area are, for the most part, primitive, compared with modern developments in the marina field. Providing the minimum services of berthing space, fuel, water, and other supplies has long been the basic feature of marinas, but in recent years a much broader range of facilities has been introduced to satisfy the diverse needs of the boating public. Swimming pools, tennis courts, small shopping centers, restaurants, showers, and fuel docks are some of the facilities afforded by large marinas in other parts of the country. Obviously, these features are aimed at attracting a much larger transient trade than is presently found in this region. It is true that southern and western maritime areas of our country enjoy a longer boating season than we have in this region, but the potential intensity of use in Southeastern Connecticut might compensate for the comparatively brief boating season.

Boating is one of the fastest growing recreational activities in the country. Without the best boating facilities available, Southeastern Connecticut could easily miss out on substantial economic benefits.

PUBLIC BOAT LAUNCHING SITES

One facility for boat owners that abounds in this region is the public boat launching site. These are state-owned sites, usually consisting of a hard-surfaced launching ramp and a parking area for cars and boat trailers. There are 22 of these sites in Southeastern Connecticut, five of which are located on tidal waters. The remaining 17 give access to most of the larger lakes and ponds in the region. These sites are shown on the map on page 15.

Most of the region's boat launching sites are heavily used during the summer months, especially those sites giving access to tidal waters. This indicates a need for additional sites, particularly along the coast. An ultimate goal of the State Board of Fisheries & Game is to provide access to every water body that is capable of supporting fishing and/or boating in this region.

INLAND LAKES

Except for New London, every town in Southeastern Connecticut has at least one fresh water lake or pond with a surface area exceeding 10 acres. There are 69 such water bodies in the region, covering 6,007 acres.

Fresh water lakes and ponds serve a variety of needs. Twenty-one of the region's lakes and ponds are controlled by water companies. This amounts to 1,267 acres, or 21% of the fresh water acreage. Boat launching facilities provide public access to about 3,000 acres, or almost half of the region's inland water acreage.

Aside from boating, however, there is only limited public use of our inland lakes. Only one state park presently provides swimming facilities on a fresh water lake, and that is Hopeville State Park in Griswold. Although the state owns land fronting on several other fresh water lakes, none of these has been developed for more intensive public use. All remaining lake frontage is privately-owned and, consequently, restricted to private access.

In order to realize the tremendous recreation potential of the region's inland lakes, public access must be acquired and maintained. The growing popularity of vacation cottages has resulted in the rapid development of lakeside properties. All too frequently, this development is on extremely small lots and extends without a break around an entire lake, thus blocking adjoining property owners and the general public from access to the water body. This not only limits the use of the lake, but has a detrimental effect on surrounding property values as well. By leaving a substantial portion of the lake frontage for public use, more people have access to the lake. Nearby property owners without direct frontage on the lake as well as owners with frontage on the lake will enjoy water access and correspondingly higher property values.

A growing problem on inland lakes and coastal waters is the uncontrolled use of motor boats. Powerful motors propel boats through the water at high speeds, creating hazards for swimmers and other boaters, irritating fishermen, and spoiling the quiet environment sought by many nearby property owners and visitors. The increasing popularity of boating indicates that regulatory measures are justified to ensure that motor boating will not eventually spoil the aesthetic and other recreation values of our inland lakes and coastal waters.

According to Section 7-151 of the state statutes, municipalities are permitted to regulate the operation of boats, limit horsepower, displacement, and hours of operation on lakes and ponds or parts thereof located within their boundaries. A special statute, Section 53-191, limits motors to 7 horse power on boats operating on the waters of Gardner Lake between sunset and sunrise.

The abundance of lakes and the variety of sizes in this region lends itself to regulatory measures that could permit a wide range of boating activities with a minimum of inconvenience to lake users. A possible approach might be to relate permitted boating activities to the size of the water body and to distance from the shore. By this method, the larger the lake and the farther from shore, the greater would be the range of boating activities allowed.

FISHING STREAMS

In addition to lakes, ponds, rivers, and tidal estuaries, the region has a large number of streams. These not only serve as important sources of water supply and as drainage ways, but they also provide many hours of pleasure to the region's 8,500 licensed sport fishermen. The Connecticut Board of Fisheries and Game has an active program of stocking streams. More than 35 streams in this region are stocked with trout.

The state controls the fishing rights to many area streams through either outright ownership, leases, or agreements with property owners. Leases and agreements with property owners for fishing rights must be viewed as only temporary arrangements. In order to preserve fishing streams for use by future generations, every effort should be made to perpetuate access rights by purchasing either land adjacent to the stream or acquiring permanent easements on such land.

SEASONAL DWELLINGS

With few exceptions, the many vacation cottages in Southeastern Connecticut are centered either on an inland lake, a tidal estuary, or on Long Island Sound. Based on discussions with municipal assessors, we estimate that there are approximately 2,000 seasonal dwellings in the region. Although new ones are constructed each year, the total number seems to be declining because of numerous conversions to year-round occupancy.

Seasonal dwellings are an obvious boon to the local tax structure. They constitute important ratables but do not increase the need for schools and other year-round municipal services. Consequently, it is to a town's advantage to retain the seasonal occupancy status of cottage developments.

Unfortunately, many buildings that were originally constructed as seasonal cottages are being converted to year-round dwellings. This increases the need for better water and sanitary facilities, more schools, expanded police and fire protection, more intensive road maintenance, and various other municipal services without a proportionate increase in property taxes. Wherever possible, conversions should be discouraged. One means to this end is zoning. Seasonal dwellings are frequently built on smaller lots than those required for year-round dwellings. Through zoning, the conversion of seasonal dwellings to year-round use may be prohibited if the lot size is not adequate.

Both seasonal and year-round building lots surrounding inland lakes and ponds, as well as those fronting on tidal waters, should be kept large enough to insure that intensive use will not prove detrimental to the quality of the water. Since most of our seasonal cottage areas depend upon on-the-lot water supply and sewage disposal, each new dwelling increases the amount of sewage effluent in the land. Once the saturation point is reached, the water body is the likely terminus for the effluent. Therefore, care should be taken to establish adequate lot sizes for seasonal as well as year-round dwellings.

VII. TOURIST ATTRACTIONS

INTRODUCTION

MYSTIC SEAPORT

HISTORIC CONCENTRATIONS

- Norwichtown
- New London
- Groton
- Stonington
- Scattered Buildings

OTHER ATTRACTIONS

APPROACHES TO EXPANDING THE REGION'S TOURIST INDUSTRY

INTRODUCTION

The tourist industry has been growing rapidly in this country during the last fifteen years. A number of factors have been responsible for this growth: an increasing population, greater personal wealth, shorter work weeks and longer vacations, increased numbers of personal automobiles, and a great improvement in the nation's highway system. Each of these factors is likely to continue to stimulate growth in the tourist industry in the future. Indeed, talk of 30-hour work weeks and four-week annual vacations suggests that the growth of the tourist industry in the next two decades may well be at a sharper rate than that experienced during the past two decades.

Possible expansion of the tourist industry is of particular interest to Southeastern Connecticut as one means of diversifying the region's economy. The urgency of economic diversification in this region was dramatically documented in SCRPA's regional economy study, published in May of 1964, which found that nearly two-thirds of all employment in this region is either directly or indirectly dependent on defense activities.

Visitors to the region spend money for a wide range of items. They buy food, lodging, souvenirs, fuel for cars and boats, fishing and boating equipment, and bait; they pay admission to various attractions, which in turn support administrative and maintenance personnel; and they pay for a host of other services in the region's many commercial and professional establishments.

Estimates of tourist expenditures have been made by various agencies throughout the country. A federal publication states that "if a community can attract a couple of dozen tourists a day throughout the year it would be economically comparable to acquiring a new manufacturing industry with an annual payroll of $100,000."* Recent calculations by the Hartford branch of the American Automobile Association show that the average tourist spends a minimum of $18 per day. When we consider that these transients require only a fraction of the municipal services supported by local taxes, they represent an even greater economic gain to the area.

How successful Southeastern Connecticut will be in expanding its tourist industry will depend in large measure on the attractions the region has to offer and on our ability to make visitors aware of these attractions. In a sense, all of the region's open space and recreation areas can be considered attrac-

* Your Community Can Profit from the Tourist Business. U.S. Department of Commerce, Office of Area Development, Government Printing Office, Washington, 1957.

tions. The natural beauty of the undeveloped countryside, the historic charm of the area's older villages, and the variety of active recreation facilities are all attractions to one degree or another. But the features most successful in drawing visitors to this region are those offering something out of the ordinary.

In this chapter we will examine several features that are unique enough to be either existing or potential tourist attractions. We will also attempt to identify ways in which the region might capitalize to a greater extent on these features.

MYSTIC SEAPORT

Southeastern Connecticut's best known tourist attraction is Mystic Seaport. The Seaport, which reproduces a mid-nineteenth century New England coastal village, draws visitors from a greater distance than any other regional attraction. In 1963 more than 334,000 persons visited the Seaport; most of them came from outside the region.

Because of the Seaport's importance, SCRPA in cooperation with the Marine Historical Association conducted a special study of its visitors on August 7, 8, and 11, 1964. Interviews with 36% of the visitors to the Seaport on these three days produced some very useful information for assessing possibilities of expanding the region's tourist industry.

Although the Seaport is known throughout the nation and attracts visitors from every state, by far the majority of its visitors come from the urban belt of the northeast coast. Fully 80% of the 3,615 visitors included in the survey came from the area shown in Figure 3 on page 47. More than 70% of the visitors came from a band 50 to 100 miles wide stretching from Boston to Philadelphia. Within this area, the bulk of visitors come from the New York City metropolitan area and the chain of cities stretching north from Greenwich, Connecticut, through New Haven and Hartford, and terminating at Springfield, Massachusetts.

The economic impact of a large number of visitors is determined to a great extent by the amount of time they spend in an area. The longer their stay, the more they are likely to spend on food, lodging, and entertainment. Mystic Seaport makes a significant contribution to Southeastern Connecticut's economy by virtue of the fact that a large number of its visitors spend at least one night in the region.

Of the visitors interviewed during the three-day survey, 22% spent one night here, 8% stayed for two nights, and 15% spent three or more nights. This indicates that during the course of a summer, from June through August, as many as 100,000 visitors could be spending at least one full day and night in Southeastern Connecticut.

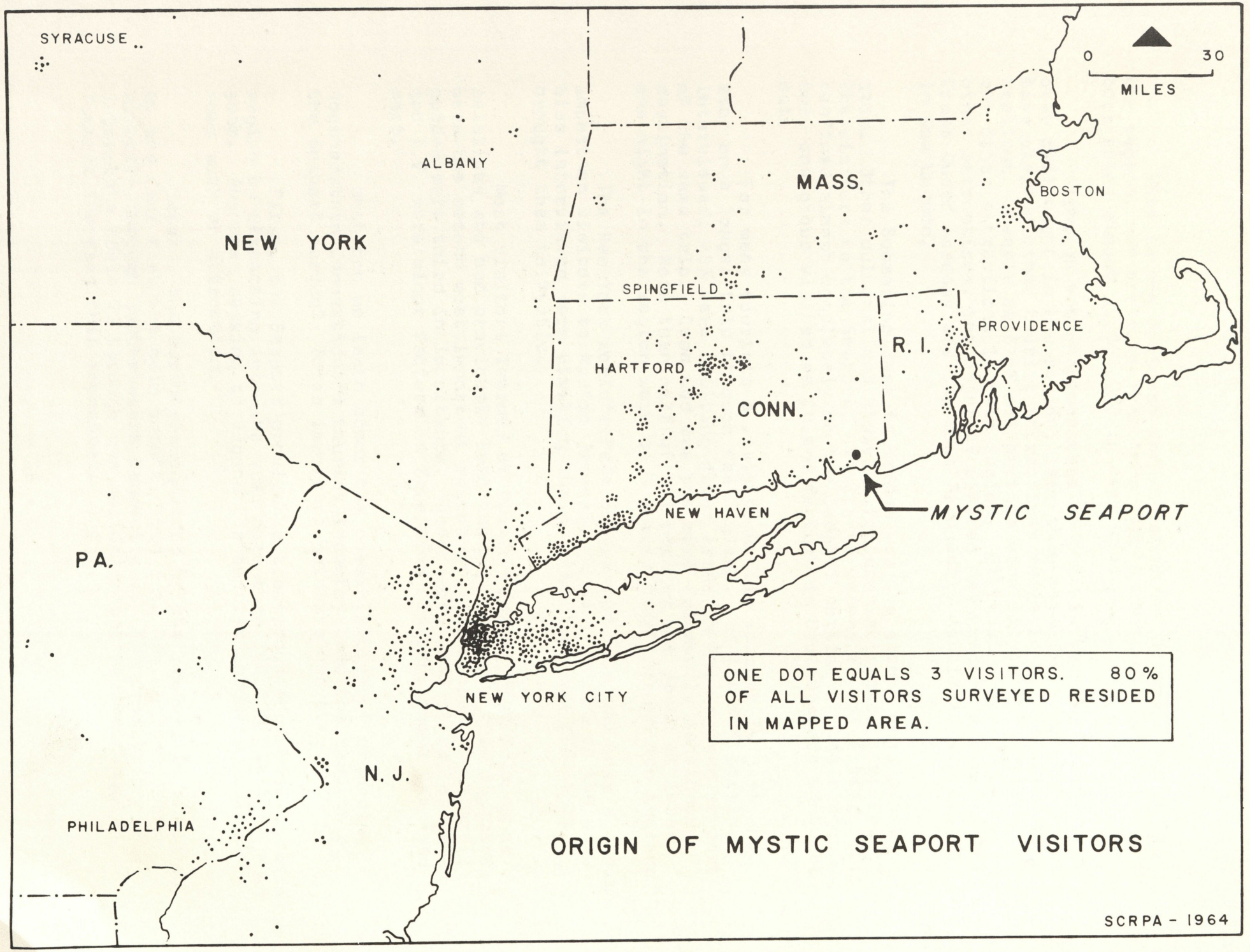

SYRACUSE
ALBANY
NEW YORK
MASS.
BOSTON
SPINGFIELD
PROVIDENCE
R. I.
HARTFORD
CONN.
NEW HAVEN
MYSTIC SEAPORT
PA.
NEW YORK CITY
N. J.
PHILADELPHIA
0
30
MILES
ONE DOT EQUALS 3 VISITORS. 80 % OF ALL VISITORS SURVEYED RESIDED IN MAPPED AREA.
ORIGIN OF MYSTIC SEAPORT VISITORS
SCRPA - 1964

FIGURE 3

This is big business and an important economic asset for the region. We estimate that in a year's time, all Seaport visitors spend almost $6,000,000 in this area.

Although a high percentage of the visitors to the Seaport stay over night in the region, less than one-quarter of the parties visited other tourist attractions while in Southeastern Connecticut. Nearly half of all parties were completely unaware of any other attractions in this region. Of those who did visit other attractions, the majority visited New London features. The Coast Guard Academy was the most frequently mentioned attraction in New London.

The Submarine Base in Groton was the second most popular stop. Other cultural and historic features attracted very few of the visitors to the Seaport. Visits to secondary attractions were confined almost completely to the coastal portion of the region. Only one group visited an inland feature in Southeastern Connecticut.

For many tourists a visit to Mystic Seaport is just one stop on a longer trip through New England. Of the 975 parties interviewed, 43% were visiting other areas in New England as part of the same trip. Cape Cod was the most frequently mentioned destination. More than half of all parties who spent at least one night in the region were on a longer trip through New England.

The New York World's Fair appears to have had only a minor impact on visitors to Mystic Seaport. Less than 12% of the parties interviewed were visiting the Fair on the same trip that brought them to Mystic.

Most visitors learned of Mystic Seaport from friends or relatives who had previously been there. Newspapers or magazines were the second most important source of information. Automobile guides were third in importance. Brochures, road signs, or radio and T.V. were minor factors in informing visitors about the Seaport.

What can we learn about the possibilities of expanding Southeastern Connecticut's tourist industry from the results of the Seaport survey? Three important points stand out.

First, the Seaport provides a tremendous advantage to this region by attracting into the area more than 300,000 visitors each year. Any area seeking to expand its tourist industry would welcome such an attraction.

Second, the advantage provided by the Seaport is enhanced by the fact that the main coastal road into New England passes directly through Southeastern Connecticut. The completion of Interstate Route 95 through the region's coastal area should further increase this advantage.

Third, although Southeastern Connecticut's tourist industry already benefits greatly from Mystic Seaport, additional effort is needed to acquaint more Seaport visitors with the other attractions of this region. Means of doing this will be explored at the end of this chapter.

HISTORIC CONCENTRATIONS

As would be expected in an area settled more than 300 years ago, Southeastern Connecticut contains a large number of homes and public buildings surviving from the 18th and 19th centuries. Many of these are undistinguished either historically or architecturally, and so are not likely to be of interest to the average tourist. But within the region there are four significant concentrations of old buildings and sites of sufficient size and interest to offer considerable potential as tourist attractions. Each of the concentrations contains a variety of buildings, has some historic significance, and is compact enough to be a good walking tour. The four concentrations are: (1) the Norwichtown section of Norwich, (2) the central portion of New London, (3) a section of the City of Groton, and (4) the Borough of Stonington. These historic concentrations are shown on Figure 2 on page 15.

NORWICHTOWN

The first settlement in Norwich in the 1660's was located to the north and west of the present city center, in the area now known as Norwichtown. In spite of the changes produced in the past 300 years, it is still possible to trace with remarkable clarity the pattern and features of that first settlement.

Of the buildings in the Norwichtown area, at least ten are of special interest because of their architecture, age, or the importance of their former owners. The Leffingwell Inn, faithfully restored and furnished by the Society of the Founders of Norwich to reproduce a typical New England inn of the 18th century, is an outstanding building and is open to the public. The Samuel Huntington House, home of one of the signers of the Declaration of Independence, and the Joseph Carpenter store, built in 1772, are also noteworthy.

Buildings are not the only means of preserving an image of the past, and it is fortunate that Norwichtown still contains three unspoiled sites that were an important part of the original settlement. The defensive position, high on a cliff, of the site of the first Norwichtown meeting house tells much about the nature of life in Southeastern Connecticut in the first years of settlement. So too does the Old Burying Ground, containing the graves of early settlers and of French soldiers who died here during the American Revolution. No New England village would seem complete without a common or a green, and the Norwichtown Green still provides a focal

point for the village.

All in all, Norwichtown contains sufficient attractions to make it worthy of special attention in expanding the region's tourist industry. At present, Norwichtown attracts few tourists. In 1963, for example, fewer than 300 adults visited the Leffingwell Inn.

NEW LONDON

New London contains eleven buildings and sites in close enough proximity to be a possible walking tour. Taken together, these buildings and sites provide a representative cross-section of New London's growth during the 17th and 18th centuries.

Early life in New London is reflected in the substantial but plain Hempstead House, built in 1678 and restored and opened to the public by the Antiquarian and Landmarks Society of Connecticut.

A more comfortable period in New London's development is called to mind by the substantial Shaw Mansion. This home was built in 1756 by a New London sea captain, served as Connecticut's Naval Office during the American Revolution, and is now the home of the New London County Historical Society.

Two public buildings of particular interest are the Nathan Hale School House, from which Nathan Hale left to join the American Army, and the striking New London County Court House, built in 1784.

Two additional features of importance lie outside the area of historic concentration. These are the Old Town Mill, which reproduces the town grist mill of 1650, and the New London lighthouse.

GROTON

The most outstanding feature in this concentration is Fort Griswold. Fort Griswold was the site of a battle in 1781 between British forces under Benedict Arnold and American Forces under Colonel William Ledyard. After the defeat of the Americans, Groton and New London were burned.

Fort Griswold today contains the remains of the Revolutionary War fortifications and additional fortifications built during the 19th century. The Fort is now managed as a State Park by the State Park and Forest Commission. Unfortunately, the Fort is not in as good repair as one might desire. The walls and ditches are damaged in spots, trenches and gun mounts are overgrown with weeds and shrubs, and signs are inadequate.

Equally important, nothing has been done to increase the Fort's potential as a tourist attraction. There are no cannon on the walls, and there are no guides to explain the significance of the Fort.

The condition of Fort Griswold is in sharp contrast to several similar forts in Canada, along Lakes Erie and Ontario. There, Forts Erie, George, and Henry have been carefully restored by the Ontario Provincial Government, staffed with uniformed guides, and successfully promoted as tourist attractions. There seems little reason why something similar could not be done with Fort Griswold.

Most of the buildings of interest in the center of Groton are concerned in one way or another with the battle at Fort Griswold. Four period homes are within a short walk of the Fort.

STONINGTON

The Borough of Stonington is unique in many ways. It is an urban village of the Colonial and Federal eras in which nearly every building is of interest. In addition to this, it has an authentic battle site and a very old lighthouse. The entire village area is an excellent concentration of historically significant buildings and sites.

Although Stonington was originally a seafaring town, there is now little apparent relationship between the village proper and the harbor area. If improvements are made to the harbor with state and federal aid, it would be desirable to establish a closer visual link between the village and the harbor. This might be accomplished by making the harbor road more important than it presently is, by the use of signs indicating where the harbor is, or by the removal of unneeded structures to open up a view of the harbor.

SCATTERED BUILDINGS

In addition to the four areas of concentration just discussed, there are four individual homes of historic significance open to the public.

Norwich contains the Rockwell House and the Nathaniel Backus House. These houses are side by side and are operated by the Daughters of the American Revolution. Both buildings were the homes of prominent Norwich residents of the 18th and early 19th centuries.

The Denison Homestead, built in 1717, stands in open country just outside Mystic. Rooms in the house are furnished to depict life at different periods during the building's history. The Homestead is operated by the Denison Society, Incorporated.

The Thomas Lee House, dating back to about 1660, is located in East Lyme. This house has been fully restored and is operated by the East Lyme Historical Society.

OTHER ATTRACTIONS

Southeastern Connecticut contains five museums of interest to tourists: (1) The Lyman Allyn Museum in New London, (2) the Slater Memorial Museum in Norwich, (3) the Mohegan Indian Museum in Montville, (4) the Submarine Museum and Library in Groton, and (5) an automobile museum in Groton. These museums offer the visitor a variety of exhibits, ranging from art to autos to artifacts.

Other important cultural attractions are the Connecticut College Dance Festival and the Mystic Outdoor Art Festival. Each of these events draws many participants and visitors to the region each summer. The Eugene O'Neill Memorial Theater, Incorporated, is currently planning to open a summer theater devoted to American plays on the property of the Waterford Beach Park. The theater will include a workshop for actors, directors, designers, and writers and a museum dedicated to playwright Eugene O'Neill.

The annual Harvard-Yale crew race is an event which draws visitors to the region from throughout the northeastern seaboard. Although this event was more widely heralded in years past, it retains a vast potential as a tourist attraction. More intensive publicity and local action to enable better viewing of this unique sporting event could make this one of the region's major tourist attractions.

The region's military installations have much to offer as tourist attractions. The concentration of Naval and Coast Guard activities in this area is both historically and economically important to the region. Both the Coast Guard Academy in New London and the Naval Submarine Base in Groton conduct interesting tours which give visitors a varied view of modern training methods and equipment.

Guided tours at the Submarine Base are conducted every weekend, but arrangements must be made in writing well in advance of a visit. Approximately 25,000 persons visit this base annually. Rules concerning visitors to the Coast Guard Academy are less restrictive. This facility is open to the public daily from 9 a.m. to 6 p.m. Guided tours of the buildings and grounds are conducted on weekends. No count of visitors to this installation is available.

The northern part of the region contains many monuments to a bygone age in the form of elaborately constructed textile mills and mill housing projects. Several of these mills have potential as tourist attractions. These include mills in Baltic, Taftville, The Falls in Norwich, and Yantic. Any one of these could be re-

stored and furnished to preserve an example of one of New England's most historically important economic activities.

APPROACHES TO EXPANDING THE REGION'S TOURIST INDUSTRY

The best prospect for expanding Southeastern Connecticut's tourist industry is to try to induce visitors to Mystic Seaport to spend more time in this region. It would be foolish not to capitalize on this existing major attraction. It is also extremely unlikely that a more well-known attraction will be available in this region for a long time to come.

Based on the findings of our survey of visitors to the Seaport, it appears that a stronger effort to familiarize Seaport visitors with Southeastern Connecticut's other attractions is called for. This effort could be approached in a number of ways: newspaper and magazine advertisements in the New York metropolitan area, radio and television announcements, mailed brochures or some sort of contact at the Seaport itself. Of the approaches available, it appears that the most satisfactory is likely to be direct contact with visitors to the Seaport. This has a major advantage of reaching the precise group at which we are aiming; it is also likely to be far less expensive than saturation advertising through newspapers, magazines, radio or television. The exact methods by which more visitors to the Seaport could be acquainted with the area's other attractions would have to be agreed upon by the Seaport and the region's various chambers of commerce. But two alternatives do appear to be available.

One approach would be to add to the existing Seaport information booths a special display of information on Southeastern Connecticut. This information could consist of brochures and maps clearly illustrating the attractions and accommodations available throughout the region. Some information about the region is now displayed at the Seaport, but it is difficult to distinguish from similar material on other areas in New England. What is needed is a spotlighting of Southeastern Connecticut.

A second, more elaborate, approach would be the establishment of one or more staffed booths at or near the Seaport specifically to supply travelers with information about the region. Or information booths might also be established at points of entry into the region or on major highways leading to the region. These programs would be more costly than the first approach, but they could result in more personalized service.

Whatever approach was used, it would be desirable to have the project a cooperative venture of the several chambers of commerce in the region. Admittedly, it might be difficult to achieve this, but all sections of the region could gain from a growth of our tourist industry. Another, quite practical, reason for cooper-

ation on this project is that coordination among the various chambers will be necessary to avoid duplication or omission of information.

In addition to an improved means of acquainting Seaport visitors with the region, another step is worth considering. This is the creation of a "Marine Heritage Area" extending along the coast from New London to the Borough of Stonington. (See Figure 4 on page 55.) This idea was first advanced by Joseph Hickey, a planner with the Connecticut Development Commission, in The Appearance of Connecticut, published by the Development Commission in 1963, and it appears to have considerable merit.

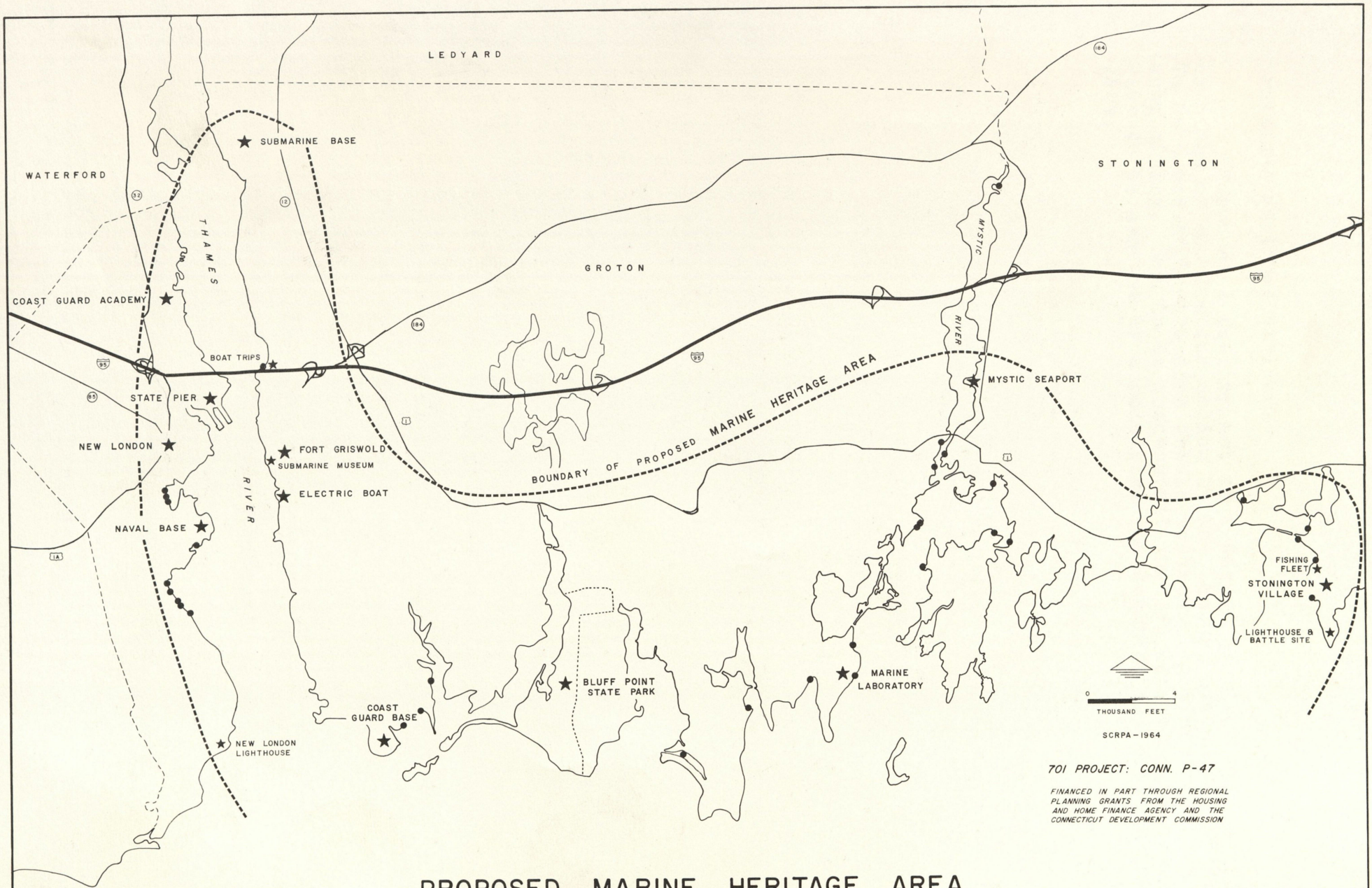
The proposed Marine Heritage Area contains a unique collection of sites, buildings, museums, relics, and operating installations associated with the maritime development of this nation from colonial times to the present day. New London contains many traces of its former position as a leading whaling port; it has the first lighthouse constructed on the Connecticut coast, an active waterfront, and it contains the nation's Coast Guard Academy. Groton has a variety of attractions: Fort Griswold, the submarine museum and library, Electric Boat - birthplace of the atomic submarine, boat tours past the Submarine Base, the Submarine Base itself, and Noank, with the University of Connecticut's marine laboratory. Stonington has Mystic Seaport, Stonington Village, the first federally-constructed lighthouse in the nation, and Connecticut's major fishing fleet. In addition, the proposed Marine Heritage Area contains most of the region's marinas and yacht clubs and is traversed by New England's Heritage Trail. It is doubtful whether any other area in the nation so well displays the variety and time span of our marine heritage as does this section of Connecticut.

Three steps seem needed to exploit the tourist possibilities of the Marine Heritage Area.

The first step is to have the area officially defined and marked to create an identity that visitors would seek. This step might be accomplished through signs indicating entrance into the area, through maps of the area, through markers at significant sites and buildings, and possibly even through route signs of a distinctive color and design that would aid visitors to tour the area by automobile.

A second step is to enhance the attractions present in the Marine Heritage Area. This could include such actions as improvement of Fort Griswold, improvement of the harbor facilities at Stonington, and possibly even historic zoning in the Borough of Stonington to protect the village's most attractive features.

A third step is a campaign to acquaint visitors with the Marine Heritage Area. This could very well be done as part of the general program to increase visitor awareness of the region's at-



PROPOSED MARINE HERITAGE AREA

★ MAJOR ATTRACTIONS
● MARINAS AND YACHT CLUBS

FIGURE 4

tractions outlined earlier.

Successful development of a Marine Heritage Area is likely to hinge on cooperative action by New London, Groton and Stonington. To be successful, the area should encompass portions of all three communities. And to be successful, the project would undoubtedly have to be managed by a committee representing all three communities.

VIII. TOOLS FOR AN OPEN SPACE AND RECREATION PROGRAM

INTRODUCTION

RESPONSIBILITIES

- Role of the Federal Government
- Role of State Government
- Role of Municipalities
- Role of Private Groups

METHODS OF PRESERVATION AND ACQUISITION

- Methods of Preservation
- Methods of Acquisition

MULTIPLE USE

MANAGEMENT

CONTACTS FOR ASSISTANCE

INTRODUCTION

If the need for open space and recreation programs is higher than at any other time in our nation's history, the tools available to conduct these programs are also more numerous than ever before. In response to a growing concern for the future urban environment, many entirely new aid programs and techniques to assist in acquiring and managing open space and recreation areas have been developed in the past decade. Indeed, understanding the tools available has become one of the major problems of local commissions in developing their programs.

Another problem facing local commissions has been to understand the role of the various governmental levels and of private groups concerned with open space and recreation. Who is responsible for what portions of the program? Questions regarding responsibility are a natural by-product of greater activity in open space and recreation by all levels of government. To work most effectively, local commissions must be able to distinguish between their responsibilities and those of the state and federal governments.

In this chapter we will review the tools and techniques now available to assist in developing an open space and recreation program and will examine the question of governmental and private responsibility for such a program. We will begin our discussion with an examination of areas of responsibility.

RESPONSIBILITIES

Since open space and recreation programs are designed to improve the "health and welfare" of the population, they are a legitimate responsibility of government. Governments were slow to recognize this responsibility for a long time, but in this century all governmental levels have developed varied and vigorous recreation and open space programs. The degree and type of responsibility of government for these programs has been viewed differently by each of our three levels of government. As a result, there are three separate areas of governmental responsibility in our overall response to open space and recreation needs. The boundaries between these three areas of responsibility are not sharp lines, but it is possible to distinguish significant differences among the roles of the federal, state, and local governments.

ROLE OF THE FEDERAL GOVERNMENT

The federal government has a basic responsibility to acquire and manage open space and recreation areas of national importance. Good examples of facilities falling within this responsibility are National Parks, Monuments, and Forests. In addition to this responsibility, the federal government, through the Bureau

of Land Management, administers 477 million acres of public lands in the West and in Alaska. These programs have not had a direct bearing on Southeastern Connecticut, and it is unlikely that they will.

There are, however, three ways in which the federal government can play an important role in an open space and recreation program for Southeastern Connecticut. These are: (1) through technical assistance, (2) through federally-aided projects that as a secondary objective can serve open space and recreation purposes, and (3) through direct financial grants to assist municipalities to plan for or acquire and develop open space and recreation lands.

(1) Technical Assistance:* Several federal agencies either possess information that would be of value to a community in its open space and recreation program or are authorized to conduct special studies that would be of value to such a program.

The U.S. Geological Survey can provide maps of topographic and geologic conditions throughout a major portion of this region. The Survey is also working on a study of ground-water resources of the region that will eventually be of great help in conservation-area planning.

Another source of help is the U.S. Army Corps of Engineers, which is authorized to make "flood plain information studies" for interested municipalities. These studies would identify the extent of flood plains in a community and assess the danger of flooding within them. There is no cost to the community for such a study.

The Corps of Engineers also may study beach erosion problems and offer suggestions for their solution. Cost of such studies is shared by the Corps and the applicant. Where the studies show justification, federal aid may also be available to assist in financing corrective measures.

The Soil Conservation Service, through the New London County Soil and Water Conservation District, can provide technical assistance in developing recreation and conservation areas. This assistance includes:

a. Information on soils and their suitability for various recreational developments.

b. An appraisal of the physical suitability of sites for recreational facilities such as playgrounds, buildings or parking areas.

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* The final section of this chapter lists specific contacts to obtain both technical and financial assistance from federal agencies.

c. Planning and application of conservation practices for soil and water management.

d. Providing standard construction plans for such recreational facilities as rest rooms, picnic tables or bath houses.

(2) Projects with Secondary Benefits: Both the Soil Conservation Service and the Army Corps of Engineers conduct flood control programs. The Soil Conservation Service is authorized under Public Law 566 to assist financially and with technical aid in flood control projects on drainage basins of less than 250,000 acres. Army Corps of Engineers participation in flood control programs is authorized under the River and Harbor Act of 1930. Flood control projects resulting from either program may include conservation and recreation purposes as secondary benefits. An example of a dual purpose project under Public Law 566 is the Spaulding Pond Dam project in Norwich's Mohegan Park. The dam will create a water-oriented recreation area as well as provide needed flood protection.

(3) Direct Financial Grants: Two types of federal grants are available to Southeastern Connecticut's communities for developing their open space and recreation programs. The first is for planning; the second is for acquisition of areas.

Section 701 of the Housing Act of 1954 authorizes the Housing and Home Finance Agency to provide grants to communities to cover up to two-thirds of the cost of preparing municipal plans. As part of its municipal plan, a community may prepare an open space and recreation plan, setting forth the municipality's goals in this important area of land use.

Direct federal aid for open space acquisition is also available through the Housing and Home Finance Agency. Grants may be made to cover up to 20% of the cost of acquiring a suitable site for municipal use or up to 30% of the cost of sites to be used on a regional basis.

Another possible source of federal funds for acquisition and development of recreation areas is the Bureau of Outdoor Recreation in the Department of the Interior. The Land and Water Conservation Act of 1963 created this new federal bureau and authorizes it to provide grants covering up to 50% of the cost of acquiring and developing state outdoor recreation projects. The act further provides that: "Funds may be transferred by a State to its political subdivisions for their projects if the latter are in accord with the State's approved plan, but the State must underwrite its political subdivisions' share of the costs."

ROLE OF STATE GOVERNMENT

In Connecticut, the state has taken an active role in attempting to provide adequate open space and recreation areas for its present and future population. The prime responsibility of the state is the provision of areas of active recreation for the state's population as a whole and the preservation of historic or conservation areas with a state-wide significance. In fulfilling this responsibility, Connecticut, through its Department of Agriculture and Natural Resources, has developed an extensive system of state parks, forests, boat launching sites, wildlife refuges, and hunting and fishing areas. All of these areas are of concern to Southeastern Connecticut and have been reviewed in earlier portions of the report.

Besides meeting its direct obligation to provide recreation areas for its citizens, the state level of government can help the municipality to develop its own program in four different ways: (1) through state regulatory power, (2) through state tax laws, (3) with technical aid from state agencies, and (4) with state financial aid.

(1) Regulatory Power: State regulatory powers primarily affect conservation aspects of the open space and recreation program. Flood prone areas may be protected from development by the State Water Resources Commission through the establishment of stream channel encroachment lines to prohibit building in areas subject to flooding. The Water Resources Commission's role in fighting water pollution is also important to the conservation program.

(2) Tax Laws: Several sections of the Connecticut Statutes encourage the preservation of open space through preferential tax assessment on selected open space land uses. Title 12, Chapters 96 - 100, permits preferential tax assessments on forest land. Public Act 490, passed by the 1963 session of the Legislature, authorizes preferential assessment on agricultural land, forest land, and areas designated in a town plan as open space preserves. Also of significance is Title 12, Chapter 81, which permits property used for scientific, educational or historical purposes to be tax exempt. While tax exemptions or preferential assessment alone cannot produce an adequate open space system, they can be useful tools to assist in creating the system.

(3) Technical Aid:* Although no state agency has a program specifically aimed at providing technical aid to open space and recreation programs, several agencies are able to provide assistance to municipalities. Those able to be of particular help are:

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the Connecticut Development Commission for general planning aid, the Board of Fisheries and Game for wildlife conservation information, the Park and Forest Commission for recreation assistance and forest planning, the Water Resources Commission for information on water supply and pollution control, the Geological and Natural History Survey for aid in identifying key natural features, and the Agricultural Experiment Station for aid in forest planning.

(4) Financial Aid: Connecticut's open space and recreation programs received a substantial boost in 1963 when the General Assembly adopted Public Act 649, providing for grants to municipalities of up to one-half the non-federal cost of acquiring open space land. The act permits state grants to be made for acquiring lands for a very broad range of conservation and recreational purposes. The following uses are specifically listed as being purposes for which grants may be made: agriculture, parks, natural areas, forests, camping, fishing, wetland preservation, wildlife habitat, reservoirs, hunting, golfing, boating, and historic and scenic preservation. A key section of the act requires a municipality to have adopted a plan of development before it may be eligible for a state open space grant. The program is administered by the Council on Agriculture and Natural Resources.

ROLE OF MUNICIPALITIES

Connecticut's towns and cities have the greatest responsibility of all three levels of government in conserving our natural environment and providing recreation areas for our growing population. Neither the federal nor state governments can shape the immediate environment in which we live. Nor can these higher levels of government provide the multitude of active recreation facilities needed close to home on a day to day basis. If the municipalities fail to provide the water reservoirs, flood water drainage areas, wildlife areas, playgrounds, play fields, local parks, and indoor recreation centers, these will not be provided by any existing federal or state program. True, both the federal and state governments provide grant programs to aid communities in acquiring needed conservation and recreation areas, but local initiative and financial commitment are prerequisites to obtaining this aid. If the municipalities of Southeastern Connecticut fail their responsibility to provide adequate conservation and recreation programs, future generations in this region will be poorer for it.

The Regional Planning Agency is a source of technical assistance developed as a result of municipal initiative. Through its staff, SCRPA provides limited technical assistance to local planning, recreation, and conservation commissions. It also has, as one of its primary functions, the responsibility for developing a regional land use plan which can serve as a guide to individual municipalities in the region. The agency maintains an extensive library of data and publications that can be of considerable help to individuals and groups concerned with general or specific recreation planning.

A detailed discussion of the role of individual municipal commissions is presented in a later section of this chapter.

ROLE OF PRIVATE GROUPS

Although government bears the first responsibility for conservation and recreation programs, private individuals and groups make important contributions in this work. Many of the efforts of private groups have been brilliant successes. This is especially true of their efforts to conserve natural areas faced with development before government agencies had realized their conservation or scenic value. Individuals and private groups can provide great assistance in at least five areas.

(1) They can provide sound advice to governmental agencies about the needs of their community and about the potential conservation and recreation areas within the community.

(2) They can provide gifts of either land or money to be used by the community for open space purposes.

(3) They can independently acquire and manage open space areas. This region contains three good examples of natural areas preserved through private action of this type: Connecticut College Arboretum, the marshland preserves of Nature Conservancy, and Pequot-sepos Wildlife Sanctuary.

(4) They can develop recreation areas for use by the community. Service groups, in particular, have an excellent record of assisting municipalities to turn raw fields into finished parks and playgrounds.

(5) They may manage their own recreation facilities and programs. Probably the best examples of this are the Y.W. and Y.M.C.A.'s, the Boy and Girl Scouts, and the 4-H program.

Without the action of private individuals and groups, our recreation and open space programs would be far less varied and far less effective.

METHODS OF PRESERVATION AND ACQUISITION

What methods are currently available to a municipality to either preserve or acquire land for conservation or recreation purposes? The answer is: A surprisingly broad range of methods is available. These methods enable the community to approach preservation and acquisition on a selective basis, using the least expensive means that will achieve the intended purpose. Broadly speaking, the tools available fall into two main groups: (1) those that will tend to preserve the land in a particular condition without requiring the community to acquire property, and (2) those

through which the community acquires some specific interest in the land.

METHODS OF PRESERVATION

Land may be preserved for open space purposes without acquisition through two approaches: regulatory powers and tax policies.

We have previously noted the fact that the State Water Resources Commission may reserve flood plain areas from development through the establishment of channel encroachment lines, defining areas within which any substantial structures would increase the danger of flooding. This technique has been used in this region along the Shetucket River in Norwich and below the village of Baltic.

Zoning powers offer municipalities another avenue of approach to maintaining open space. Four types of zoning provisions have been used with some degree of success in various parts of the country. These are flood plain zoning, exclusive agricultural zoning, low density zoning, and cluster zoning.

(1) Flood plain zoning has been used to restrict the type of development permitted in flood-prone areas to structures and facilities that would not be damaged by flooding or would not be likely to increase the likelihood of flooding. To date, only the town of Groton in this region has created a flood plain district.

(2) Exclusive agricultural zoning has been used successfully in a few areas, most notably in California, to prohibit non-agricultural uses of prime agricultural land. This technique has been most successful in areas of high value, intensive agriculture. It has not been used extensively in the East and has not been used at all in Connecticut.

(3) Large lot zoning has been viewed by some communities as a technique of preserving open space without an expenditure by the town. To be useful at all in preserving open space, large lot zoning should require lots of two acres or more. Such low density may be difficult to justify except in areas of poor soil and slope conditions. Where soil conditions warrant, large lot zoning may be used, first, to protect the health of the community's population and, only as a secondary benefit, to preserve open space.

(4) A new zoning technique, and one which offers considerable prospect as a legitimate means of securing open space is so-called cluster zoning. Under cluster zoning, a developer is permitted to reduce his lot sizes and concentrate his housing units in one or more portions of his tract, leaving the remainder for open space and recreation use. Although he is permitted to con-

centrate the housing units, the overall population density of his development may not exceed that permitted in the zoning district in which the development is located.

To illustrate: a developer proposing to construct 100 homes in a zoning district with a minimum lot size of one-half acre would normally fill some fifty acres of land with 100 homes. Under cluster zoning provisions, he might be allowed to reduce his lot sizes to 10,000 square feet and to cluster the housing in compact groups. This would consume about 25 acres of land. The remaining 25 acres would be permanently dedicated to open space and recreation use under the management of either a homeowners' association or the community. Figure 5 on page 66 illustrates these principles.

The advantages of this device are many. It is flexible. The developer has built the same number of homes. Less grading and site preparation are usually required. Street and utility lines are shorter, an advantage to both the town and developer. Open space has been preserved and recreation areas created. In short, a better living environment should result.

Several communities in Connecticut now have provisions in their zoning regulations to permit cluster development. None of the Southeastern Connecticut regulations yet contains this device, but one example of a type of cluster development exists at the Highlands in Ledyard.

This development was planned and partially built before zoning was adopted in Ledyard. The original subdivision plan called for single family homes on lots of 15,000 square feet. Recently, by agreement with the town, garden apartment units are being substituted for some single family homes. Within the development, forty acres of land have been set aside as common open space and recreation areas. Included in this are or will be a ten-acre lake, playgrounds, walkways, a beach club, and tennis courts. Management is under a homeowners' association.

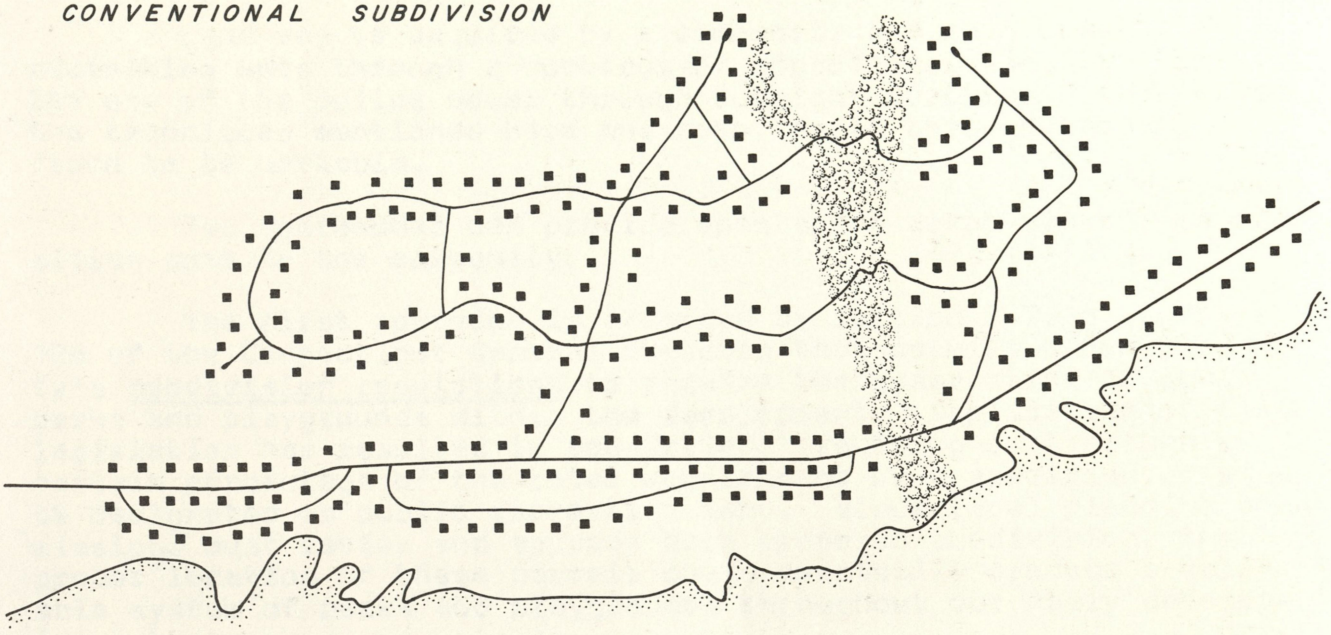
The cluster zoning approach is not without its problems. Poor design, land unsuitable for active recreation, and questions of responsibility for maintaining common open space areas can create headaches for both the developer and the town. But solutions to these problems have been found elsewhere and could be found here. The potential that cluster zoning offers to develop an integrated open space system in every community far outweighs the initial difficulties that may be encountered.

Tax policy has already been discussed under our examination of the role of state government. It suffices here to say that through preferential tax assessments on forest land, agricultural land, and open space preserves, and through tax exemptions for scientific, educational or historical property, communities can encourage the preservation of important elements in the open space

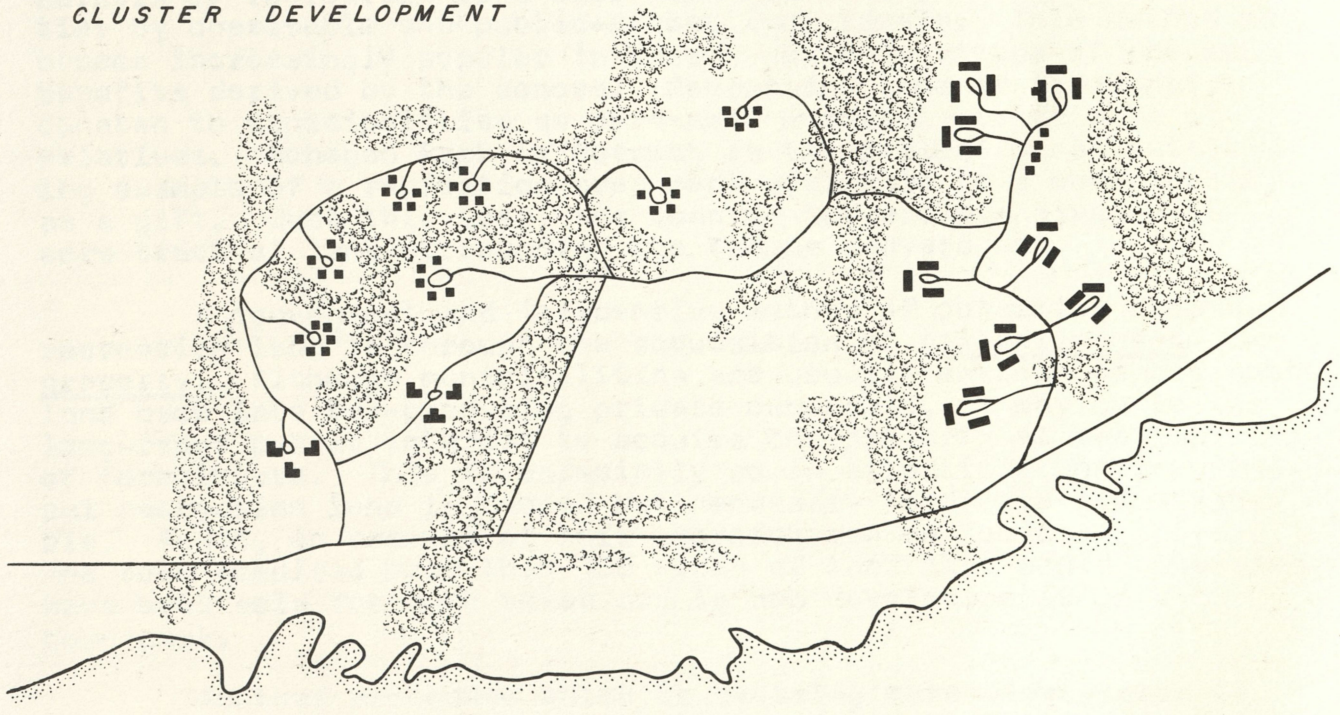
PRINCIPLES OF CLUSTER DEVELOPMENT

THE SAME NUMBER OF FAMILIES CAN BE HOUSED IN THE CLUSTER DEVELOPMENT AS IN THE CONVENTIONAL SUBDIVISION.

CONVENTIONAL SUBDIVISION



CLUSTER DEVELOPMENT



ADAPTED FROM *ACTION FOR OUTDOOR RECREATION FOR AMERICA* BY THE OUTDOOR RECREATION RESOURCES REVIEW COMMISSION.

FIGURE 5

system. This technique, however, will not do the entire job of developing the open space system.

METHODS OF ACQUISITION

Land may be acquired by a community for open space and recreation uses through a spectrum of approaches, ranging from the use of the police power through outright purchase. Each of the techniques mentioned here has been tested through use and found to be workable.

Two approaches can provide open space areas without acquisition cost to the community.

The first approach is afforded by Section 8-25 of Chapter 126 of the Connecticut General Statutes that permits a municipality's subdivision regulations to require the reservation of small parks and playgrounds within the development. Application of this legislation has resulted in regulations requiring that either a certain percentage of the total development or a specified acreage be designated as public recreation land. Since local planning commissions must review and approve each proposed subdivision, the proper location of these parcels could eventually produce a valuable system of parks and playgrounds throughout our newly developing suburbs.

The second means of acquiring free open space or recreation land is through outright gifts. Some of our most valuable parcels of recreation land have been given or left to municipalities by charitable and public-minded individuals. This method has become increasingly popular in recent years by virtue of the tax benefits derived by the donors. Recreation land is frequently donated to municipalities as permanent memorials to friends or relatives. Mohegan Park in Norwich is the region's most outstanding example of a recreation area made available to a municipality as a gift. Just this year, the town of Ledyard was given a 10-acre tract of land surrounding the famous Ledyard Oak.

A convenient and inexpensive method of obtaining needed recreation land is through the acquisition of tax delinquent property. Although municipalities are usually anxious to get such land back into tax-producing private ownership, it may be in the long-range public interest to acquire the property at the low cost of foreclosure. This is especially so in situations where municipal recreation land is needed but necessary funds are not available. Again, an example of this approach can be found in Ledyard. The town acquired more than 100 acres of land that would otherwise have been sold for back taxes and is now developing it into a town park.

Another procedure which is becoming more widely used to preserve open space is the acquisition of easements to private

property. By this method a municipality or other government agency pays the land owner to permit public access on his land. A variation of this is the purchase of development rights whereby a land owner receives a sum of money from the state or municipality and in return agrees not to permit the intensive development of his land. The land owner may still use the property for purposes which do not destroy its open character. This method is often used in some states to preserve scenic vistas or the aesthetic qualities of a country roadway.

Of course, the most expensive means of acquiring municipal recreation land is through outright purchase. This may be accomplished in two ways: (1) All local funds. By this method the municipality produces all of the funds necessary for the acquisition. These funds are usually obtained from available sources or from bond issues. (2) Local funds plus state and federal aid. Both the state and the federal governments offer financial assistance to municipalities making open space and recreation land acquisitions. Connecticut's Public Act No. 649 permits the Council on Agriculture and Natural Resources to make grants to municipalities amounting to one-half of the non-federal share of costs for recreation and open space land. Federal grants for such acquisitions may be obtained from the Urban Renewal Administration of the Housing and Home Finance Agency, which administers the Federal Open Space Land Program created by the Housing Act of 1961. Under this act, municipalities may receive up to 20% of their recreation and open space acquisition costs from the federal government. By way of example, a town which wants to purchase a recreation area that costs $10,000 would receive $2,000 from the federal government and $4,000 from the state government. Only $4,000 of the total cost would be derived from local sources.

An intermunicipal approach to acquiring open space and recreation land can result in even greater federal assistance. When two or more municipalities join together to purchase recreation and open space land, a federal grant amounting to 30% of the purchase costs may be obtained. Thus, if two towns agreed to purchase a tract of land priced at $10,000, the federal government would pay $3,000, the state would pay $3,500, and each municipality would pay only $1,750 of the total costs.

A variation of the intermunicipal agreement approach has been adopted by the Capitol Region Planning Agency. By virtue of an agreement signed by CRPA and its member towns, all recreation land acquisitions in the Capitol Region are eligible for the 30% federal grant as long as they are compatible with a regional open space and recreation plan and federal grant requirements. The intermunicipal agreement not only coordinates open space and recreation land acquisitions throughout a region, but it is of considerable financial benefit to the participating municipalities. Communities in the Capitol Region are expected immediately to

save $100,000 in local funds on open space grants already applied for. This approach might well be followed here in Southeastern Connecticut.

MULTIPLE USE

As we have stated earlier in this report, open space land should serve some functional purpose. In many instances more than one use of a particular tract of open space land is possible or even desirable. A classic example of this multiple use in this region is the Pachaug State Forest, where thousands of acres of woodland are conserved; a public hunting area is maintained; and valuable potential water reserves are protected from development. Another example of multiple use is the flood control project being constructed in Mohegan Park in Norwich. This will not only prevent future flooding but also will provide water-oriented recreational facilities in the park.

Multiple use is intended to derive the most beneficial return for public investment in open space and recreation land. Many of the region's existing public facilities are devoted to one particular function and could easily be serving additional needs. In many cases, areas which are serving a conservation function could be developed for active recreation uses. Water company holdings, for example, are not presently open to public access, but they could some day be utilized as hunting areas, golf courses, or parks in addition to filling their major function of water supply. Until now the fear of water pollution has discouraged public use of these lands, but certainly, measures could be taken to preserve water quality in spite of carefully-controlled public use.

The Soil Conservation Service and the U.S. Army Corps of Engineers incorporate multiple use into many of their construction programs. Small watershed and flood control dams almost invariably produce valuable recreation areas in addition to their conservation and protection functions.

Many portions of the state land holdings in Southeastern Connecticut could be developed for more intensive public use without detracting from their basic reservation or conservation functions. Riding and hiking trails, picnic grounds, camping areas, and target shooting ranges, are a few of the recreation facilities that could be provided on extensive state reserves.

At the municipal level, facilities which offer considerable multiple use potential are those associated with the public schools. School playgrounds and gymnasiums are frequently the only recreation facilities available in a municipality. Only by making these facilities available to the public during non-school hours can the greatest benefit be realized from them.

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MANAGEMENT

At the municipal level state statutes permit a variety of boards and commissions concerned with open space and recreation. These include the conservation, recreation, park, and planning commissions, and boards of education.

Conservation commissions are primarily concerned with the development and conservation of natural resources in a community. They are empowered to conduct research on the existing and potential uses of land and to make recommendations concerning land use to the municipal legislative body and the planning commission. A conservation commission may also receive gifts, local, state, and federal funds, acquire land, and administer funds and property in the name of the municipality.

Park commissions should concentrate their efforts on acquiring, developing, and maintaining municipal parks and recreation facilities. They should be closely allied to recreation commissions, especially for the purpose of determining present and future recreation needs. The park commission should also work closely with the planning commission to ascertain needs and locations for future facilities.

Recreation commissions should be primarily concerned with developing active recreation programs for all segments of the population within a municipality. Their activities should be directed more at the use of facilities rather than at their provision.

Planning and zoning commissions are vitally concerned with the amount and location of recreation and open space areas in a municipality but do not engage in land acquisitions or administration. As part of its preparation of a town plan, this commission evaluates existing facilities and makes recommendations regarding present and future needs to the governing body. In this capacity it is heavily dependent upon the specialized knowledge of the park, recreation, and conservation commissions. Planning commissions may also require subdivision developers to leave areas within a proposed subdivision to the municipality for recreation use. Through cluster zoning, the commission may play an important part in securing areas for the community's open space system.

Another municipal agency involved with recreation is the local board of education. Every municipality has some type of recreation facility whose use is controlled by the board of education. In some towns the boards of education have written formal policies which permit the use of school facilities in public recreation programs.

The multiplicity of boards and commissions with open space and recreation interests can be either beneficial or deleterious to a community, depending on the degree of coordination among the

commissions. In towns where only one or two of the commissions exist, the commission activities may be broader than they would be in a town having several. In the latter case, each commission's primary responsibilities should be locally defined and duplication of effort among commissions should be avoided. Town commissions should complement each other rather than acting as rivals.

Municipal agencies should not only coordinate efforts within their respective municipalities, but should also explore the possibilities of working with neighboring towns on common problems. Water resources, hunting and fishing areas, and large municipal parks are a few items which might be acquired and maintained more easily by intermunicipal arrangements than by each town attempting to provide for its own needs.

CONTACTS FOR ASSISTANCE

FEDERAL AGENCIES

(1) U.S. Geological Survey:

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Mr. John Horton
Geologist-in-Charge
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Surface Water Branch
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(2) U.S. Army Corps of Engineers:

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Engineering Division
U.S. Army Engineer Division, New England
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(3) Soil Conservation Service, U.S. Department of Agriculture:

Mr. N. Paul Tedrow
State Conservationist
Soil Conservation Service
Old Bookstore
Storrs, Connecticut

(4) Housing and Home Finance Agency:

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Director, Region One
Housing and Home Finance Agency
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(5) Bureau of Outdoor Recreation:

Mr. John L. Sullivan
Regional Director
Bureau of Outdoor Recreation
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9th and Chestnut Streets
Philadelphia, Pennsylvania

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(2) Department of Agriculture and Natural Resources:

Mr. Joseph N. Gill, Commissioner
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(3) Park and Forest Commission:

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Hartford, Connecticut

(4) Board of Fisheries and Game:

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(5) Geological and Natural History Survey:

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IX. TENTATIVE OPEN SPACE AND RECREATION PLAN

GENERAL GOALS

SPECIFIC OBJECTIVES

Open space and recreation areas are only one element of concern in a total regional plan. Developed land uses, the transportation system, and water supply or sewage disposal are equally important. All of these aspects of the environment must be included in a complete regional plan, and an adequate regional plan must consider all of these elements in relation to each other.

But open space and recreation areas differ from other elements of a regional plan because their location is somewhat fixed by nature. Potential water reservoir sites are limited to a relatively few physically suitable spots; marshland and swamps are located by topography; and hills and valleys were molded by the forces of nature and cannot easily be altered. Consequently, an open space and recreation plan must conform in large part to the physical structure of the region.

For these reasons, it is possible to identify areas that have a high potential for open space or recreation use before all elements of the complete regional plan have been prepared. It is also possible to develop a fairly good idea of what open space and recreation areas will be needed in the future before the total plan is completed. In this report we have done both of these things. Our conclusions on the open space and recreation needs and potentials of Southeastern Connecticut are summarized in the Tentative Open Space and Recreation Plan on page 76 and in the series of General Goals and Specific Objectives presented on the following pages.

The Tentative Open Space and Recreation Plan is just that. It is an initial basis for discussion with the communities and interested persons and groups within the region. It will undoubtedly be modified in a number of respects before it is incorporated as one element of a complete, adopted regional plan.

GENERAL GOALS

We believe that an adequate Open Space and Recreation Plan should be aimed at achieving the following goals:

(1) The creation of a pleasant, healthy living environment.
(2) The conservation of the region's natural resources, particularly its future water supply.
(3) The expansion of Southeastern Connecticut's tourist industry.
(4) The provision of adequate recreation areas for the region's present and future population.
(5) The integration of our diverse permanent open space and recreation areas into a linked regional system.
(6) The preservation of our scenic and historical heritage.
(7) The limitation and definition of urban areas and the prevention of urban sprawl through selective location of open space and recreation areas.

FIGURE 6

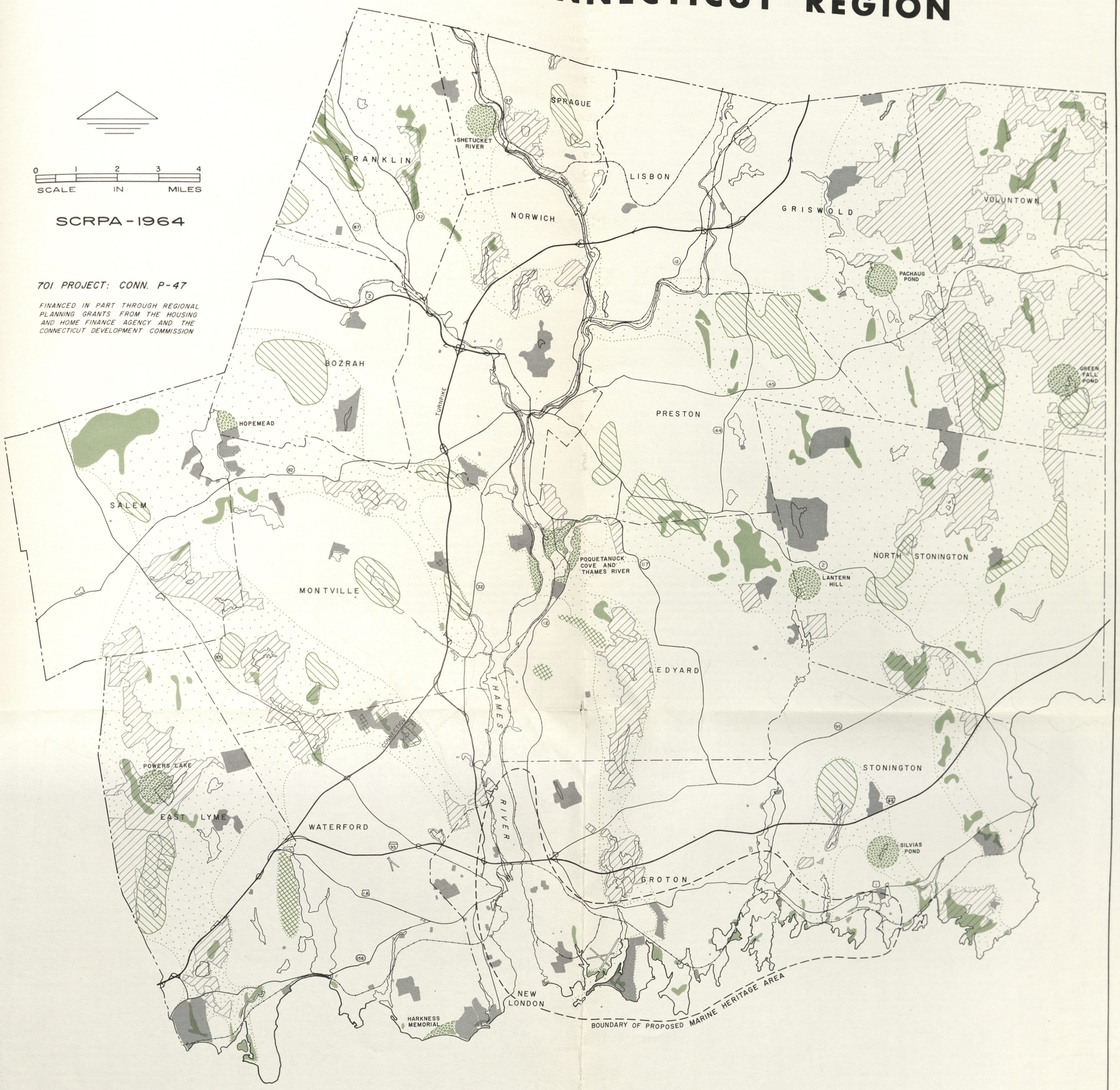
SOUTHEASTERN CONNECTICUT REGION

0 1 2 3 4
SCALE IN MILES

SCRPA-1964

701 PROJECT: CONN. P-47

FINANCED IN PART THROUGH REGIONAL PLANNING GRANTS FROM THE HOUSING AND HOME FINANCE AGENCY AND THE CONNECTICUT DEVELOPMENT COMMISSION



TENTATIVE OPEN SPACE & RECREATION PLAN

LEGEND

- EXISTING PERMANENT OPEN SPACE
- EXISTING RECREATION AREAS
- POTENTIAL RESERVOIR SITES
- TIDAL MARSHES AND INTERIOR WETLANDS
- OUTSTANDING GEOLOGIC FEATURES
- PROPOSED STATE PARKS
- AREA PROPOSED FOR LIMITED DEVELOPMENT
  (THIS AREA WOULD BE LIMITED TO LOW DENSITY RESIDENTIAL AND COMMERCIAL DEVELOPMENT, AGRICULTURE, RECREATION, AND CONSERVATION AREAS.)

SPECIFIC OBJECTIVES

To achieve these goals, SCRPA proposes the following specific open space and recreation objectives for this region.

(1) The improvement of existing state parks, particularly with respect to broadening the activities and facilities available.
(2) The expansion of Hopemead and Harkness Memorial State Parks.
(3) The restoration of Fort Griswold.
(4) The provision of additional camping facilities on state land.
(5) The rapid development of Bluff Point State Park.
(6) The acquisition of additional public access points to fresh water lakes and tidal waters.
(7) The acquisition and development by the year 2000 of seven additional state parks at the following locations:

a. Poquetanuck Cove and the Thames River in Ledyard, Preston, and Montville.
b. Lantern Hill in North Stonington.
c. Green Fall Pond in Voluntown.
d. Pachaug Pond in Griswold.
e. Shetucket River in Sprague.
f. Powers Lake in East Lyme.
g. Silvias Pond in Stonington.

(8) The preservation by public or private agencies of four major marsh areas in the following locations:

a. Pataguanset River in East Lyme.
b. Wequetequock River in Stonington.
c. Outer Mystic Harbor in Groton and Stonington.
d. Poquonock River in Groton.

(9) The preservation of major interior wetlands of high value to wildlife conservation.
(10) The preservation of the following key geologic features:

a. Oswegatchie Hill in East Lyme.
b. A portion of the Ledyard Moraine in Ledyard.
c. Lantern Hill in North Stonington.

(11) The preservation and exploitation of our major potential reservoir sites. A regional water authority appears to be the most satisfactory means of achieving this objective.
(12) The linking of specific open space and recreation areas into a unified system wherever possible. The major pattern for such a system is shown in the Tentative Plan.

(13) The provision of open space corridors between urban developments.

(14) The encouragement of adequate open space and recreation facilities at the local level. Specific objectives include the following:

a. Development of more complete and varied facilities.
b. Provision of additional local parks in some communities.
c. Provision of indoor recreation facilities in the larger communities.
d. Expansion of local conservation programs.
e. Encouragement of greater intermunicipal cooperation in the provision of recreation facilities.
f. Encouragement of agreements between towns and boards of education to permit public use of school recreation facilities.

(15) The signing of an intermunicipal agreement between SCRPA and its member municipalities to coordinate the acquisition of open space and recreation areas. Such an agreement will permit signatory communities to receive 10% more federal aid for open space acquisitions.

(16) The expansion of efforts to acquaint visitors to Mystic Seaport with the other attractions of Southeastern Connecticut.

(17) The development of a Marine Heritage Area as shown generally on the Tentative Plan and in Figure 4.

(18) The improvement of potential tourist attractions throughout the region.

(13) The provision of open space corridors between urban developments.

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